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ABSTRACT

Among the 46 papers in this proceedings are the following 36 selected titles: "The Intergenerational Exercise/Movement Program" (Ansello); "Using Computers for Adult Literacy Instruction" (Askov et al.); "Measuring Adults' Attitudes toward Computers" (Delcourt, Lewis); "Issues in Computers and Adult Learning" (Gerver); "Preassessment of Adult Student Interest in Relation to Success in Introductory Computer Courses" (Korhonen, McKenzie); "Self-Initiated Learning Projects of Prison Inmates of the District of Columbia Department of Corrections" (Brown); "Role of the Adult Educator in the Prisons" (Collins); "Instructional Television Programs for Graduate Professionals" (Baldwin); "Northern Ontario Distance Education Access Network" (Croft); "Development of Distance Education in the United States" (Granger); "Distance Education: Practitioners' Pleas for Research" (Mugridge); "Graduate Education Desires, Detractors, and Determinants for Navy Aviation Officers" (J.D. Smith); "Contact in Telecourses: The Trade-Offs" (Wiesner); "International Programming in the Cooperative Extension System" (Lambur et al.); "Functional Skills--Experiential Learning Outcomes of the Volunteer 4-H Leader" (Howe); "Perceptions of the Effectiveness of 4-H Volunteer Key Leaders as Held by Key Leaders and County 4-H Agents in Ohio" (Richey, K.L. Smith); "Re:Fit: Career Change Options for Well Defined Dislocated Worker Populations" (Heimlich, Van Tilburg); "Defining Human Resource Development" (D. Smith); "Representation Technologies in the Future of Lifelong Learning" (Jackendoff); "Missing Pieces in the Evaluation of Extension Training Programs in Developing Countries" (Jones); "UNICEF: A Children's Program with High Adult Education Impact" (Marsick); "India's Agricultural Extension Development: The Move

toward Top-Level Management Training" (Rivera); "Public and Private Sector Extension in Agricultural Development" (Crowder); "A Factor Analytic Study of an Adult Classroom Environment Scale" (Aagaard, Langenbach); "The Scope and Evolution of Hermeneutics and Its Challenge to Lifelong Learning Professionals" (Boucouvalas); "Participatory Modes for Empowering the Disadvantaged" (Cassara); "The Psychological Well-Being and Sources of Stress in Returning Students" (Copland, Yu); "Context and Learning" (Ingham); "Three Forms of Learning in Social Context" (Jarvis); "Informal Adult Experiential Learning--Reality in Search of a Theory and a Practice" (Rossing, Russell); "A Comparison of the Value Orientations and Locus of Control of Adult Learners in Schools of Business and Education" (Londoner et al.); "Adult Experiential Learning: A Grasping and Transforming Process" (Sheckley); "Qualitative Evaluation Research: Issues and Dilemmas" (Fingeret); "Typology of Law-Literate Adults Based on Deterrents to Participation in Adult Basic Education" (Hayes); "Hispanic Participation in Adult Education" (Wallace et al.); "Adult Education Policy: The Missing Link" (Oaklief); "Quality Control in Non-Traditional Education" (Shaw, Fox); "The Uses of Innovative Methodology in Adult Education Research" (Beder et al.); and "Marketing to Adult Learners: Using Focus Group Research to Develop a Marketing Plan" (Rosenbloom, Thole). (KC)

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# LIFELONG LEARNING
# RESEARCH CONFERENCE
# PROCEEDINGS

FEBRUARY 19 AND 20, 1987

CENTER FOR PROFESSIONAL DEVELOPMENT
THE UNIVERSITY OF MARYLAND UNIVERSITY COLLEGE

AND

DEPARTMENT OF AGRICULTURAL & EXTENSION EDUCATION
THE UNIVERSITY OF MARYLAND COLLEGE PARK

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# PREFACE

This publication is a report of the proceedings of the Eighth Annual (1987) Lifelong Learning Research Conference held at The University of Maryland in College Park, Maryland on February 19 and 20, 1987. The conference focus on non-formal adult education grew out of a concern with problems in this region and the need to facilitate dialogue between researchers and practitioners involved in their resolution. Papers dealt with adult/continuing education and concerns such as aging, literacy, teaching, learning theory, policy, human resource development, extension education, prison education, distance education, computers, international education, and research methodology.

This conference was designed to build interagency linkages in the region but has developed a national reputation. Sponsoring agencies include the Maryland Cooperative Extension Service, The University of Maryland's Department of Agricultural and Extension Education, The University of Maryland University College Center for Professional Development, the American Association of Adult and Continuing Education, the Metropolitan Washington Association for Adult and Continuing Education, the Maryland Association of Adult, Community, and Continuing Education, the Maryland State Department of Education, and the Virginia Association for Adult and Continuing Education. The papers presented were selected "blind" by a steering committee that reviewed over 80 abstracts. The steering committee included representatives from The University of Maryland, Virginia Commonwealth University, American Council on Adult Education, Kazanjian Associates, Inc., United States Department of Agriculture, University of Pennsylvania, Maryland Cooperative Extension Service, Cecil County, The College Board, University of DC, The Penn State University, George Washington University, Baltimore County Public School System, Naval Education and Training Office, and Cornell University.

A major goal of the conference was to bridge the gap between theory and practice by providing a mechanism through which researchers and practitioners could share their concerns. The conference had an interdisciplinary focus, bringing together people with different academic backgrounds who share similar concerns with lifelong learning issues.

The abstracts published in these proceedings were reproduced directly from copy provided by the authors. The authors' names and addresses are listed at the bottom of the first page of each abstract. If you desire more information, please correspond directly with them.

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The Maryland Association of Adult, Community, and Continuing Education (MAACCE) is a professional association representing adult educators in the state of Maryland. MAACCE is the result of a merger of MAAE, MAPSE, and MACE in January 1983, and is the Maryland affiliate of AAACE. MAACCE provides a variety of activities and interest areas for adult educators in public schools, colleges and universities, hospitals, correctional institutions, community organizations, government agencies, cooperative extension, and business and industry, through its five divisions: adult education, community education, continuing education, correctional education and literacy. An annual conference, several regional workshops, and three different publications are available to members, as well as a directory of consultants and an active legislation information network.

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The Virginia Association for Adult & Continuing Education, a vital, dynamic association of thirty years, is a comprehensive organization of individuals whose occupations and interests influence the education and training of adults. Membership (currently in excess of 200) includes educators from public and private schools, colleges, community colleges and universities as well as training directors from business, industry, the military and governmental agencies. The VAACE is committed to working for greater individual growth, a better Virginia and a better nation by encouraging, stimulating, and extending the continuing education of its own members and others throughout the state. The membership shares a determination to improve the quality of adult life in Virginia through continuing education.

### Metropolitan Washington Association for Adult and Continuing Education (MWAACE)

The Metropolitan Washington Association for Adult and Continuing Education sponsors programs and activities for the professional growth of its members who believe that education is a life-long learning process and that adult and continuing education is integral to that process.

MWAACE's unique position as an affiliate of the American Association for Adult and Continuing Education (AAACE) in the nation's capital enables its agenda to encompass international, national, and local professional interests.

Therefore, the primary objectives of MWAACE are: to examine the dynamics of adult and continuing education; to access the remarkable resources in the area; to disseminate information to its members; and to offer our professional expertise to the membership and the community. For further information, write: Metropolitan Washington Association for Adult and Continuing Education, P.O. Box 44044, Washington, DC 20026-4044.

### Adult and Community Education Branch Division of Instruction, Maryland State

The Adult and Community Education Branch, part of the Division of Instruction, is responsible for the establishment and maintenance of federal and state-funded programs in adult and community education. The mission of the Branch is to enhance and expand adult and community education offerings in the State of Maryland. This is accomplished through grant awards to local agencies, inservice and technical assistance, monitoring and evaluation processes, research, and dissemination. Program areas include Adult Basic Education, Adult General Education, GED Instructional programs, External Diploma Program, Evening High School, School-Community Centers Program, the Multi-Service Community Centers and Volunteer Programs. The branch office is located at the Maryland State Department of Education Headquarters, 200 W. Baltimore Street, Baltimore, Maryland 21201.

## American Association for Adult and Continuing Education

The American Association for Adult and Continuing Education (AAACE) was founded on 11/12/82 at the National Adult Education Conference in San Antonio, Texas, as a result of the consolidation of the Adult Education Association of the USA (AEA) and the National Association for Public Continuing and Adult Education (NAPCAE). These associations served members and the public for over 30 years and this historical consolidation has united over 6,000 members and subscribers.

The purpose of AAACE is to provide leadership in advancing the education of adults in the lifelong learning process. This goal is achieved by unifying the professional, developing and utilizing human resources, encouraging and using research, communicating with the public and individual and institutional association members, offering numerous member services and publications, and otherwise furthering the multiple causes of adult and continuing education.

AAACE's professional journal, Lifelong Learning, published eight times per year, offers authoritative articles covering current trends and issues in adult and continuing education. The journal keeps readers up-to-date on new books, innovative instructional strategies, and practical applications of research in adult education. AAACE also publishes Adult Education Quarterly, the major research and theory journal in the field. Its in-depth articles on research and evaluation provide a vital tool for professors, students and researchers. In addition, each member of the Association receives the AAACE Newsletter, published ten times per year. The Newsletter reports on developments in national and state legislation, innovative programs, conferences, job announcements and people-in-the-news.

Each fall the AAACE in concert with a state affiliate association sponsors and conducts the largest adult education conference in the U.S. It also co-sponsors state affiliate regional conferences, and several regional seminars and workshops.

## American Council on Education

The American Council on Education (ACE), founded in 1918, is the nation's major coordinating body and principal voice for postsecondary education. It is an independent, comprehensive, voluntary association that is dedicated to the improvement of American postsecondary education. In cooperation with other associations, it serves as the focus of discussion and decision-making on education issues of national importance. Composed of more than 1,600 postsecondary institutions and national and regional organizations, ACE has a thirty-seven member board of directors representing the diversity of American postsecondary education.

The Council acts as a coordinating body among national and regional education associations, while providing national leadership in cooperation with others, for improving standards, policies, programs, and services for postsecondary education; provides national leadership on equality issues for women, minorities, and older students in higher education; coordinates self-regulation initiatives; offers technical information and advice on access for the handicapped; works with other associations in representing higher education to the federal government; sponsors seminars to help presidents and other administrators improve management and leadership; offers a fellowship program to strengthen academic administrative leadership, and conducts national identification programs for the administrative advancement of women and minorities in higher education; facilitates access to higher education by evaluating and establishing credit recommendations for noncollegiate learning in the military, corporations, government agencies, labor unions, and associations; operates the General Education Development (GED) Testing Service, which provides adults who have not graduated from high school with an opportunity to earn a high school credential; and coordinates activities on international education issues.

# TABLE OF CONTENTS

Papers are listed alphabetically by first author's last name within content areas. You may want to review all papers as some fall within several categories.

PREFACE........ i
STEERING COMMITTEE........ ii
SPONSORS........ iii

AGING

The Integenerational Exercise/Movement Program: Social and Psychological Impact
Edward E. Ansello........ 1

Knowledge and Attitudes of Health Care Providers Toward Sexuality in the Institutionalized Elderly
J. Conrad Glass, Jr., Lois R. Carter and R. David Mustian........ 6

COMPUTERS

Using Computers for Adult Literacy Instruction
Eunice N. Askov, Connie Maclay and Avis Meenan........ 11

Measuring Adults' Attitudes Toward Computers: An Initial Investigation
Marcia A. Delcourt and Linda H. Lewis........ 14

Issues in Computers and Adult Learning
Elizabeth Gerver........ 18

Preassessment of Adult Student Interest in Relation to Success in Introductory Computer Courses
Lloyd J. Korhonen and James McKenzie........ 23

CORRECTIONS

Self-Initiated Learning Projects of Prison Inmates of the District of Columbia Department of Corrections
Wilbert Brown, Jr. ........ 28

Role of the Adult Educator in the Prisons: A Critical Perspective
Michael Collins........ 32

DISTANCE EDUCATION

Panel: Introduction--Distance Education: Practitioners' Pleas for Research
Allan F. Hershfield........ 37

Instructional Television Programs for Graduate Professionals
Lionel V. Baldwin........ 39

Northern Ontario Distance Education Access Network
Marian Croft........ 44

Development of Distance Education in the United States
Daniel Granger........ 48

Distance Education: Practitioners' Pleas for Research
Ian Mugridge........ 52

Graduate Education Desires, Detractors, and Determinants for Navy Aviation Officers
Joseph D. Smith ........ 57

Contact in Telecourses: The Trade-offs
Peter K. Wiesner ........ 60

EXTENSION

The Role of the Montgomery County Cooperative Extension Service in Providing Information to Farmers and Other Users
Kurt Finsterbusch and William Rivera ........ 65

International Programming in the Cooperative Extension System
Michael Lambur, David Abedon, Mary Andrews and Keith Scearce ........ 69

Functional Skills--Experiential Learning Outcomes of the Volunteer 4-H Leader
Patricia A. Howe ........ 74

Reliability and Validity Studies of the Ohio Cooperative Extension Service Assessment Center
Joseph A. Kwarteng and Keith L. Smith ........ 79

Perceptions of the Effectiveness of 4-H Volunteer Key Leaders as Held by Key Leaders and County 4-H Agents in Ohio
Marsha L. Richey and Keith L. Smith ........ 84

HUMAN RESOURCE DEVELOPMENT

Re:Fit: Career Change Options for Well Defined Dislocated Worker Populations
Joe E. Heimlich and Emmalou Van Tilburg ........ 89

Defining Human Resource Development: A Research Study Establishing a Common Vocabulary and Definition for Human Resource Development
Douglas Smith ........ 94

Representation Technologies in the Future of Lifelong Learning
Harry A. Jackendoff ........ 99

INTERNATIONAL

Missing Pieces in the Evaluation of Extension Training Programs in Developing Countries
Rose L. Jones ........ 104

UNICEF: A Children's Program with High Adult Education Impact
Victoria J. Marsick ........ 109

India's Agricultural Extension Development: The Move Toward Top-Level Management Training
William M. Rivera ........ 114

Characteristics of Saberkas' Leaders at the District Level in the State of Sarawak, Malaysia
Keith L. Smith and Esmawi Othman ........ 119

Public and Private Sector Extension in Agricultural Development
L. Van Crowder ........ 124

LEARNING THEORY

A Factor Analytic Study of an Adult Classroom Environment Scale
Lola Aagaard and Michael Langenbach.................................... 129

The Scope and Evolution of Hermeneutics and Its Challenge to Lifelong Learning Professionals
Marcia Boucouvalas.................................................... 133

Participatory Modes for Empowering the Disadvantaged
Beverly Benner Cassara................................................ 138

The Psychological Well-being and Sources of Stress in Returning Students
Barbara A. Copland and Lucy C. Yu..................................... 143

Symposium: Context and Learning
Roy J. Ingham......................................................... 148

Three Forms of Learning in Social Context
Peter Jarvis.......................................................... 153

Informal Adult Experiential Learning--Reality in Search of a Theory and a Practice
Boyd Rossing and Robert Russell....................................... 158

A Comparison of the Value Orientations and Locus of Control of Adult Learners in Schools of Business and Education
Carroll A. Londoner, Frederic Linder and David Bauer.................. 163

A Descriptive Study of the Use of a Negotiated Process Approach in Health Care Team-Community Group Interactions
Joan S. Reeves........................................................ 168

Adult Experiential Learning: A Grasping and Transforming Process
Barry G. Sheckley..................................................... 173

LITERACY

Qualitative Evaluation Research: Issues and Dilemmas
Arlene Fingeret....................................................... 178

Typology of Low-Literate Adults Based on Deterrents to Participation in Adult Basic Education
Elisabeth R. Hayes.................................................... 183

Hispanic Participation in Adult Education
Michael B. Wallace, Andrew G. Malizio and Catherine E. Erwin.......... 188

POLICY

Adult Education Policy: The Missing Link
Charles R. Oaklief.................................................... 193

PROFESSIONAL STUDIES

Quality Control in Non-traditional Education
Bonnie F. Shaw and David B. Fox....................................... 198

RESEARCH

Symposium--The Uses of Innovative Methodology in Adult Education Research
Hal Beder, Thomas Valentine and Emmalou Van Tilburg................... 202

Marketing to Adult Learners: Using Focus Group Research to Develop a Marketing Plan
Al Rosenbloom and Nancie Thole ........................................ 205

SOCIAL PARTICIPATION

The Interdisciplinary, Sequential Specificity, Time Allocation, Lifespan Model of Social Participation: A Report of Two Applications in Adult Education
Peter S. Cookson .................................................... 210

# THE INTERGENERATIONAL EXERCISE/MOVEMENT PROGRAM: SOCIAL AND PSYCHOLOGICAL IMPACT*

Edward F. Ansello [1]
Vivian B. Weiss [2]

## Abstract

Older adults in a residence were "partnered" with high school students in two 12-week exercise/movement classes during Fall 1985 and Spring 1986; these used the medium of intergenerational contact in exercise, education, inquiry and socialization to enhance social, psychological, and physical health. Improvements were noted in elders' Affect Balance, depression and number of physical ailments. No significant changes were found among the adolescents. For elders benefits of participation tended to be tied to current involvement in the program, with some effects measurable 14 weeks later in a post-posttest. The effects of the program on adolescents may have been mitigated by the deaths of one elder in each of the two series. Recruitment, procedural and evaluation strategies learned are offered for the conduct of intergenerational programs.

## PROBLEM

Adolescents and elders are often outside the mainstream of American activity. Socially, economically, politically, they inhabit the margins of a society centered on productivity. Not surprisingly, the young and the old have little meaningful interaction with each other. Children mature into adolescence with stereotypes and indirect experience substituting for contact in shaping their attitudes about aging and elders. Advanced age often brings physical and social impediments to involvement in everyday, intergenerational activity. Planned intergenerational programs attempt to bridge the gap and to redress presumed senses of isolation, aloneness, and not "mattering" among these marginal inhabitants (Mothner, 1985; Struntz & Reville, 1985). Good mental health at any age is assumed to depend upon feeling useful (Heschel, 1966; Rosenberg & McCullough, 1981).

The goal of this intergenerational program was to promote an increased feeling of mattering, mutual understanding and life satisfaction among participating teenagers and older adults. The basic objectives of the program were to: 1) provide opportunity for an on-going relationship in which elders and adolescents could perform a helping role and come to better understand each other (relationships); 2) provide information about physical and psycho-social needs and limitations of older adults (cognitions); 3) teach adolescents to lead exercises appropriate for the abilities and limitations of their older adult "partners" (activity).

---

*This project was supported by the United Jewish Endowment Fund, United Jewish Appeal Federation of Greater Washington.

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## METHODOLOGY

### Outreach

The project focused on Jewish-affiliated youth attending either the Jewish Day School (JDS) or several public and private high schools within a 15-mile radius, and upon residents of the Revitz House, a high-rise dwelling for the elderly on the grounds of the Jewish Community Center. In the ideal, JDS students would be paired in activities with residents of the Revitz House only 1/4 mile away. It was soon clear that, even though we had identified our target populations, we would have to arouse their interest, enthusiasm and desire to participate, appealing to each population differently through recruitment techniques that included flyers, demonstration of aging-adapted exercises, and a combination of demonstration and lectures on aging processes and intergenerational relationships.

### Subjects

As a result of these recruitment strategies, we obtained 38 elder and 50 adolescent volunteers, each of whom was randomly assigned to experimental or control conditions. Experimental status meant participation in elder-teen partnerships for a 12-week program of 90 minutes a week of "classes" comprised of exercise/movement, education about health, aging and social processes, and intergenerational social interaction; plus outside oral history inquiry. Adolescent members of the control group participated during the Fall in an age-homogeneous physical education class in their high school, and older adult control group members were placed on a waiting list during the Fall for the Spring program. Unfortunately, for our study, 15 of the Fall's 19 adolescent controls spent the following Spring in Israel and, consequently, neither participated in the Spring class nor completed a post-test questionnaire before their departure. Fortunately, during the Spring class we were able to add a small group of Jewish Day School gym class students (n = 5) to serve as study controls. Because of the overall small number of adolescent controls, we combined the Fall and Spring elders' groups and the Fall and Spring adolescents' groups to serve experimental and control conditions; so our net numbers were: 26 experimental and 12 control elders, 26 experimental and 9 control adolescents.

About 84% of the older adult residents of Revitz House who participated in this project were female, with an average age of 81 years. Over two-thirds were born outside of the U.S., and nearly 80% were widowed or otherwise without spouse. About two-thirds of the adolescent student participants were female, primarily from the eleventh grade, followed by the tenth and twelfth grades. Less than fifteen percent were foreign born and close to 85 percent lived with both of their natural parents.

### Procedure

We took weekly assessments of progress in relationships, cognitions and activity; in addition, all participants received a battery of tests at the beginning and end of each series, with the Fall participants being retested at the end of the Spring program in order to assess duration of effects. The battery of tests, administered individually to elders and in groups to adolescents, was comprised of: an extensive demographic survey, the Life Satisfaction Index-A (LSIA), the Center Depression Scale (CES-D), the Affect Balance Scale (ABS), a physical health check-list, a project team-constructed attitude test, and a single question on social satisfaction. We employed a double-blind research technique wherein the University of Maryland's Department of Epidemiology supervised and conducted all pre- and post-testing and analyses. Project staff conducting the program were not informed of findings until after the second series of 12-weeks.

Weekly programs began each Wednesday at 3 o'clock. Each session included 15 minutes of socialization, 40 minutes of teacher-led exercise, 10 minutes of adolescent-led exercises, 20 minutes of discussion led by a guest speaker or instructor. Each session highlighted a particular aspect of health, exercise or life-span well-being; for instance, body language, exercise for flexibility, nutritional needs as we age, breathing and breathing enhancement, and cardiovascular workout/cool down. Guest speakers discussed intergenerational relations, psycho-social processes of aging, and media portrayals. In addition, at least one weekly session focused on conducting an oral history, a requirement of adolescent participants.

## Dependent Measures

Life satisfaction. To measure the life satisfaction of both the older adults and adolescents, we employed the Life Satisfaction Index-A (LSIA) of Adams (1971), a self-administered inventory developed for use with adults aged 50 years and older. Since the LSIA was developed for use with older adults, some items were changed on the adolescent questionnaire in an attempt to make the scale more appropriate for teenagers.

Emotional well-being. We used two instruments to assess emotional well-being: the Center for Epidemiological Studies Depression Scale (CES-D) and the Affect Balance Scale (ABS). Designed for use in general population surveys, the CES-D consists of 20 statements that describe feelings and behaviors. The ABS is essentially three scales--one measuring positive affect; one measuring negative affect, with the sum of the absolute value of these two scales indicating overall happiness.

Physical health. We employed two different types of health status measures. The first consisted of a checklist of 18 common ailments (e.g., frequent headaches, swollen ankles, constipation, trouble sleeping). The "yes" responses were summed to give a total reported ailment score. The second measure comprised a single item regarding the respondent's personal health rating of excellent, good, fair, or poor.

Attitude changes. We developed 21 true-false statements regarding attitudes about self (e.g., "I can do anything I set out to do") and attitudes about teenagers and older adults (e.g., "many older adults are sad and depressed", "teenagers can't get much out of talking to an older adult"). After examining response distributions, we retained only 13 statements for the older adults and only 12 for the adolescents.

Social satisfaction. Satisfaction with amount of social contact was assessed by a single question which asked respondents to indicate whether they felt completely, very, moderately, slightly, or not all satisfied with the amount of contact they had with their friends and relatives.

## RESULTS

Relationships. The outside-class oral history portion of the project was particularly effective in bonding relationships between the young and old. Unfortunately, one elder partner died during each of the 12-week sessions, but even these losses were lessons. During the Spring the adolescent partner of the only elderly male revealed to us that he had been uncomfortable about doing the oral history, until the two actually started on it. He told what a fascinating life this man had led in spite of difficult passage to this country, lack of language facility, minimal education and severe poverty. The old man died a few weeks later. His young partner expressed deep condolences to the family, gave them a copy of the man's oral history, and let them know he had become a real friend. He did not attend several of our sessions after that, later explaining that the death had made this difficult for him. When he did return, we all discussed how fully the man had lived his life until the day he died, and how fortunate he was not to have a lingering, agonizing end.

Cognitions. Participants achieved the second objective in several ways, e.g., by learning to exercise various muscle groups and through a developed body awareness. They moved arms, legs, back and head to improve balance, endurance and cardio-vascular strength. They learned to give a less stressful workout when muscles and bones are older, while stretching and toning to the fullest extent possible from the safety of a seated position; and to use imagery and massage to help people release tension from shoulders, jaws and neck, sites where people often suffer from tight muscles, etc.

Activity. As the students became comfortable leading three-minute exercise segments their leadership improved. At the beginning they learned to progress from head and upper body movement through torso to feet. Next they learned to progress from simple to more complex movements and later incorporated concern for aging joints and back, still mindful of the need to exercise those parts as fully as possible for continued mobility.

Battery of Tests. To test the influence of an exercise/movement class on the life satisfaction, social satisfaction, emotional well-being, physical health, self attitudes and attitudes toward teenagers or older adults, several analyses were performed.

I. Elders. First, Fall class participants ($n = 12$) were compared with the control group ($n = 12$) of older adults. Change scores were computed on each of the dependent measures except the attitudes items, and participant and control change scores were compared and tested for significant differences. Only change in negative Affect Balance Score and change in total Affect Balance Score were significantly different ($p < .02$) between cases and controls. Class participants reduced their negative Affect Balance one-half point, whereas the controls increased their negative Affect Balance by three-quarters of a point. A subsequent analysis of variance of case and control post-test scores with pre-test scores as covariants, showed that group (class membership vs. non-membership) significantly ($p < .03$) contributes to the explained variance of the negative ABS post-test score (increasing $R^2$ by .10) and nearly significantly ($p = .056$) contributes to the variance of the absolute ABS score. Neither life satisfaction, depression (CES-D), positive affect, physical health nor social satisfaction appear influenced by group participation, whether examining change scores or post-test scores controlling for pre-test scores.

A second set of analyses for older adults combined surviving and healthy Fall and Spring class participants ($n = 22$) to increase sample size and the likelihood of demonstrating a treatment effect (provided one exists). Pre- and post-test mean scores for class participants were compared on all dependent variables except the attitude measures. While no significant differences were uncovered, mean CES-D score decreased a full point ($p = .10$) and mean total number of physical ailments reported decreased by .3 ($p = .09$). Also, all differences between pre- and post-test scores on all measures, although not significant, were in the anticipated positive direction. With regard to the 13 attitude statements, no significant changes between pre-test and post-test in percent agreement were found; attitude changes were generally in the desired direction.

The last set of analyses involving the older adults focused on the endurance of any class participation effects. Even though few significant changes occurred between pre- and post-test, the continuation of any trends witnessed or the reversal of such trends can be examined. Unfortunately, the number of cases available for this delayed examination of effects 14 weeks after the initial post-test was reduced from twelve to eight due to two refusals, one respondent who was too ill and one who had memory lapses. T-statistics were computed comparing post-test and second post-test means. Findings are mixed. Social satisfaction and perceived health appear to continue to improve even though the total number of reported ailments continue to increase. Regarding affect balance, improvement or no change occurred on all three measures immediately following the exercise/movement class with a return to baseline scores three months after the class ended. Both life satisfaction and depression appear to get worse at the time of the second post-test.

II. Adolescents. For the first set of analyses change scores between pre- and post-tests were calculated for the LSIA, the CES-D, the negative, positive, and absolute value ABS,the number of reported ailments, perceived health status and social satisfaction. Exercise/Movement class participants and gym class controls were then compared on the basis of these change scores. Change scores for the two groups do not vary significantly form one another except regarding perceived health. Class participants reported virtually no change in health status, while controls reported poorer health. An analysis of variance of case and control post-test scores with pre-test scores as covariates does not demonstrate any effect of group on post-test values for any of the dependent measures examined above including perceived health. These findings, together with an examination of baseline group means for perceived health, suggest that the apparent differences in change scores are likely the result of pre-test group differences. Thus, participation in the exercise/movement program does not appear to have significantly influenced adolescent values on any of the factors measured.

The second set of analyses focused solely on the exercise/movement class participants; it involved comparing pre-test and post-test group means on all the dependent measures except the attitude items, and comparing percent agreement with the attitude statements before the class versus after the class. Post-test values on all measures were not different from pre-test values.

## DISCUSSION

The small numbers of participants, exacerbated by the unexpected loss of many adolescent controls, render this project a pilot study for quantitative analyses purposes and reduce the likelihood of demonstrating treatment effects. Even so, the two series of intergenerational programs produced some significant quantitative and several significant qualitative results. Certainly, there was meaningful progress in our three objectives of relationship, cognitions and activity. Some partners continue their contact these several months later.

At the same time, the study demonstrated a constant threat to this type of intergenerational programming, the frailty and deaths of elderly participants. As a group, the Spring elders were seven years older than their Fall counterparts, and were much more frail. This vulnerability may have mitigated the effects for the elders of the exercise/movement program, and affected relationships with adolescent partners; relatedly, there was more absenteeism and cynicism by Spring elders. These may well have offset developing gains among the adolescents. It is more than likely that deaths in each of the two series offset adolescents' gains in emotional well-being and attitude measures. As a result of these and other experiences, we would recommend that prospective intergenerational programs of length, consider several guidelines:

(1) Carefully screen elders for positive outlook on life, alertness, and health; (2) Allow extra time for recruitment because of relatively low interest levels by elders and competing commitments among teens; (3) Select a meeting site that is mutually accessible to both age groups, well-ventilated and architecturally suitable for physical movement; (4) Conduct separate orientation sessions for elders and adolescents prior to the start of the program to outline goals and objectives; (5) Obtain continuous evaluation of and from all participants during each session; (6) Vary the weekly format, using one master teacher, different exercises, and an array of guest speakers; and (7) Confer with school authorities to help promote the program, solicit curriculum development, and explore means of encouraging student participation, such as academic credit for involvement.

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# KNOWLEDGE AND ATTITUDES OF HEALTH CARE PROVIDERS TOWARD SEXUALITY IN THE INSTITUTIONALIZED ELDERLY

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## Abstract

The major purpose of this study was to determine the knowledge and attitudes of nursing home caretakers toward elderly sexuality. A second purpose was to determine the extent to which certain sociodemographic and institutional factors were associated with the caretakers' knowledge and attitudes toward elderly sexuality. Implications of these findings for practice are explored in this paper.

Myths, stereotypes, and taboos have surrounded the subject of sex in older adults. The literature dealing with aging seems to suggest that society possesses negative perceptions regarding the elderly engaging in sexual activity. These negative feelings appear to be even more pronounced for the institutionalized elderly. Staff and employees in homes for the aged, nursing homes, extended care facilities, mental hospitals, and other total care institutions tend to perceive the elderly as sexless. Many administrators are fearful they will not be able to control private sexual activity; so they attempt to desocialize, discourage, punish, and ridicule any display of compassion and sensuality among the residents of these institutions (Rubenstein, 1978). Wasow and Loeb (1975, p. 162) found that nursing home staff are frequently distressed and do not know how to handle sexual inquiries and acting-out behaviors: "Traditionally it has been viewed as something that should not be there, and if it is there it should be eliminated, controlled, and defeated."

Attitude toward sexuality of the elderly appears to be especially important for those who care for the aged. It is believed that inhibitory environments are likely to result from the negative attitudes of caretakers (LaTorre and Kear, 1977). In addition, negative attitudes and environmental restraints may do more than restrict sexual behavior. It is theorized that the sexuality of the older adults and their self-esteem are closely related. The active discouragement and restriction of sexual behavior may lower one's self-esteem and produce self-deprecatory beliefs (LaTorre and Kear, 1977).

In addition to negative attitudes, the professional nurse and other less highly trained caretakers are, by and large, unprepared knowledge-wise in the fields of sexuality and gerontology. Most nurses, even in their nursing degree programs, have not had the eductional opportunities to acquire the knowledge and skills to provide adequate health care for older patients with sexual concerns. It appears that nursing schools only give token support to including either gerontology or sexuality in the curriculum (Mims and Swenson, 1978).

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The interrelationship of sexual knowledge and attitudes is documented by a few studies. White (1982a) found the frequency of sexual activity among residents, as reported by both residents and staff, correlated positively with staff attitudes. In addition, White found that staff and residents with a greater knowledge of sexuality and aging tended to have more positive attitudes. The studies by White and Catania (1982) and Hammond (1979) revealed that increased knowledge about sexuality and aging through education tended to result in more permissive attitudes in nursing home staff gerontology students, nursing home residents and their families. McContha and Stevenson (1982) confirmed this hypothesis when they observed that nursing home aides with a greater general knowledge about aging tended to have more permissive attitudes toward sexuality of the elderly. Mims and Swenson (1978) feel that the ability to provide meaningful sexual health care is highly correlated with sexual knowledge and positive attitudes.

Since accurate knowledge and positive attitudes of the caretakers in long-term care facilities appear to be essential in providing optimal patient care, it seems important to get some measure of the current knowledge and attitudes of health care providers who work in such facilities. "Systematic research on attitudes of nursing home staff toward sexual expression by older residents is sparse and of recent origin (Stevenson and Courtenay, 1983, P. 4)." The research project described here is one attempt to get some measure of the current knowledge and attitudes of one group of health care providers. Such information should be useful data for persons concerned with the education of these individuals.

Specifically, the present study was concerned with the following objectives:

1. To ascertain the health care providers' knowledge about sexuality and their attitudes toward sexuality in institutionalized older adults.

2. To ascertain if there is a relationship between the health care providers' knowledge about sexuality and their attitudes toward sexuality in institutionalized older adults.

3. To ascertain if certain sociodemographic characteristics (age, gender, race, marital status, job position, education, nursing education, religious denomination, and religiosity) of health care providers are related to their attitudes and knowledge about sexuality in institutionalized older adults.

4. To ascertain if certain institutional factors (length of time the nurse has been a geriatric caretaker, time in current position, and whether or not the nurse has been involved in gerontology continuing education courses in the past three years) are related to the health care providers' attitudes and knowledge about sexuality in institutionalized older adults.

## METHODOLOGY

One of the most populous counties in North Carolina was chosen as the research site. The North Carolina Board of Nursing furnished the names, addresses, and Directors of Nursing of all the skilled care nursing homes in the county (seven). Contact was made with the Administrator of each home; and a personal conference was scheduled with each Administrator, at which time the research project was explained. Five Administrators granted permission to conduct the study in their institution. The Directors of Nursing or the Inservice Coordinators were contacted by phone and then with a follow-up letter and visit. Questionnaires were distributed to these individuals and they administered them to the health care providers at the end of a regular staff conference. The health care providers, who consisted of nursing assistants, licensed practical nurses, and registered professional nurses, were given time to answer the questions at the end of the meeting. A total of 60 questionnaires were collected. Three of the questionnaires were discarded due to incomplete answers, leaving 57 usable forms for analysis.

The Aging Sexual Knowledge and Attitudes Scale (ASKAS), developed by White (1982b), was used to measure the knowledge and attitudes regarding sexuality in older persons. The ASKAS is a 61-item questionnaire which is designed for either paper-and-pencil administration (used in this study) or a personal interview. The non-technical language is intended to be used with persons possessing a minimum of some high school education. The first section consists of 35 items dealing with knowledge about aging sexuality. Respondents can answer "true," "false," or "don't know" for each item. In this study, one point was assigned to a correct answer and two points were given to an incorrect or "don't know" answer; therefore, the scores could range from 35 to 70. Persons who scored 35-46 were considered "most knowledgeable," 47-58 were "moderately knowledgeable," and those who scored 59-70 were considered to be "least knowledgeable." The second section of ASKAS consists of 26 items which measure attitudes toward sexuality in the aged. White used a seven-point Likert scale. For this study, a five-point scale was used with the answers ranging from "Strongly Disagree" to "Strongly Agree." "No Opinion" was the mid-range. Scores could range from 26 (permissive attitude) to 130 (restrictive attitude). Scores 78 and above were considered "restrictive" and scores below 78 were considered "permissive" in this study. A demographic data sheet was used to gather information regarding the sociodemographic and institutional variables.

The Pearson Product-moment Correlation Coefficient was used to analyze the data at a .05 level of significance.

## FINDINGS AND DISCUSSION

The health providers in this study had a mean knowledge score of 53.04 out of a possible 70, indicating they were "moderately knowledgeable" about sexuality of older persons, as measured by the ASKAS. In terms of their attitudes, the providers had a mean score of 121.89 out of a possible 130. This would seem to indicate that the health providers were highly restrictive in their attitudes toward the sexuality of the elderly. This finding about attitudes supports the earlier studies regarding nursing home staff (Wasow and Loeb, 1979; Falk and Falk, 1980).

The findings of this study indicate a significant inverse correlation (r=-.30) between the knowledge scores and the attitude scores. As the knowledge about the sexuality of the elderly increased, permissive attitude toward the sexuality of the aged decreased. Another way of saying this is that more knowledge is related to more restrictive attitudes. This finding does not support the findings of some earlier research (White, 1982a; White and Catania, 1982; McContha and Stevenson, 1982).

Only two demographic variables were significantly related to the knowledge of the providers toward sexuality of the aged--religiosity (.29) and education (-.34). Age, gender, race, marital status, religious denomination, position, and nursing education were not significantly related to knowledge. Religiosity in this study was measured by having the respondents rate themselves as to how religious they felt themselves to be. Based on their rating, persons who expressed greater religious convictions possessed more knowledge about elderly sexuality. In the scoring used in this study, a high score for education indicated a higher level of education, while a low score on the ASKAS meant the individual had greater knowledge regarding the sexuality of older persons. Thus, it appears that the more knowledge the provider possessed about the sexuality of the elderly, the more formal education he/she had received. This finding is not a surprise, for one would expect nurses with more formal education to be more knowledgeable (including sexual knowledge) than nurses who had finished fewer years of schooling.

Three significant correlations were found between sexual attitudes about the elderly and the sociodemographic variables of this study--position (.55), education (.43), and nursing education (-.39). Providers who had attained a higher level position tended to have more restrictive attitudes toward the sexuality of older adults. Persons who have higher positions usually have greater responsibility for the overall operation of the skilled care nursing home, and one might expect these individuals to feel a sense of responsibility and duty to the other residents and family members of the residents. Such reasoning could account for the more restrictive attitudes which tended to be held by those persons holding the higher positions of leadership. This reasoning is supported by Steffl (1975). More restrictive attitudes were associated with a more advanced level of general education. This finding contradicts the earlier works by McContha and Stevenson (1982), Wasow and Loeb (1975), and White (1982a). In contrast to the finding regarding general education, attitudes of persons in the current study tended to be more permissive as the level of nursing education increased. This conclusion supports Damrosch's (1981) results which indicated more permissive sexual attitudes as the level of nursing education increased. It is difficult to explain why the attitudes of the persons in this study tended to be more restrictive as the general educational level increased and tended to be more permissive as nursing education levels increased, but it is certainly a factor which warrants further study.

There was not a significant relationship between knowledge about aging sexuality and the time the health provider had been with the elderly; however, there was a significant relationship between knowledge and time in current position (-.30) and continuing education ( .30). As tenure in a particular position increased, it appears that the providers' knowledge base about elderly sexuality increased. On the other hand, increased participation in continuing education tended to be related to less knowledge about the sexuality of older adults. It is difficult to explain these two relationships. It could be that as one stays in a particular position for a length of time he/she may, through one's personal experience with older adults, gain greater knowledge regarding elderly sexuality. Even though the caregivers' continuing education experiences may not have been concerned with aging sexuality, it still is difficult to explain why increased participation in continuing learning experiences is related to less knowledge. This is certainly different than one might expect. This issue warrants further study.

In contrast to this last finding, the number of continuing education experiences in which the health providers had participated in the last three years was related (-.32) to the providers' attitudes about sexuality in older persons. With an increase in participation in continuing education activities, it seemed that the providers had less restrictive attitudes toward the sexuality of the elderly. Length of time working with older persons and length of time in current position were not significantly related to the providers' attitudes.

## IMPLICATIONS

The health providers in this study were moderately knowledgeable regarding the sexuality of older persons, but they were highly restrictive in their attitudes toward elderly sexuality. The degree of knowledge possessed by the caretakers about the sexuality of the aged did appear to be related to restrictive attitudes. While this finding was surprising given the previous research; generally, the providers having the most knowledge were those individuals who were the supervisors or administrators. Coupled with this was the finding of a significant relationship between the position the providers held and their attitudes toward the sexuality of older adults; namely, persons who held more responsible positions may be especially concerned about how smoothly the institution functions, and, therefore, are sensitive to how sexual expression by the elderly can create potential problems for the institution, both among the other residents and the families of the residents.

It would appear that one implication of this study would be to initiate learning opportunities for nursing persons to acquire greater knowledge about sexuality in older persons. It would seem that these individuals need more than a "moderate knowledge" about this subject. It appears that nursing education has slighted both the subjects of human sexuality and gerontology in its curricula. It appears that an understanding of aging sexuality is needed. In addition to an understanding of the knowledge of aging sexuality, it seems that attention in the curricula also should be given to helping nurses develop more positive attitudes toward sexuality in older adults. In addition, it appears that workshops designed to help nursing home supervisors develop more positive attitudes toward sexuality in older individuals would be appropriate.

More studies are needed with regard to elderly sexual needs and behavior, as well as attitudes and knowledge of caretakers and their influence on the care and quality of life of the aged. "The question remains as to the extent of the problem, the causes of the problem, and the appropriate solutions. Thus, it would appear that the issue of sexual activity is important to consider in the institutional living environment of older persons (White, 1982a, p. 16)."

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# USING COMPUTERS FOR ADULT LITERACY INSTRUCTION

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## Abstract

The development of the Penn State Adult literacy courseware is described. Research results from using the courseware in correctional setting are summarized. A national project, funded by the Gannett Foundation, to infuse technology into adult literacy programs is described.

## DEVELOPMENT OF THE PENN STATE ADULT LITERACY COURSEWARE

Computer-Assisted Instruction (CAI) courseware for beginning adult readers was developed during the 1984-86 fiscal years with funding from the Pennsylvania Department of Education, Chapter I and 310 Adult Basic Education Special Projects. This courseware uses a "whole word" approach with some word building activities in teaching 1,000 high frequency and functional words to adult beginning readers. The goal is expanded word recognition for adult non-readers. The courseware is interactive, branching and responding to the user's answers and needs. The courseware runs on an Apple IIe microcomputer with two disk drives, color monitor, printer, and a speech synthesizer (Echo GP). The courseware consists of 28 double-sided disks which deliver the instructional program and record student responses.

The courseware begins with a module on computer usage, especially acquainting the student to the speech synthesizer, the commands, and the letter/number keys. Reading vocabulary has been divided into two categories: picturable and non-picturable words. These are further divided into groups of ten words (or word sets) in a lesson. Picturable words are introduced with a graphic while non-picturable words are introduced using short selections on a variety of topics. The words are taught in context using the speech synthesizer with multiple choice and completion exercises to practice recognition of the target words. Games are used to reinforce the acquisition of new vocabulary. A specially designed word processor with word bank allows the student to practice using the vocabulary in his/her own compositions which may be printed.

Words frequently found on application forms of all types are taught. The student practices this vocabulary by filling in an application form with his/her own data which may be printed as a reference. Another module provides practice in word building with consonants being added before common word families (such as ake).

The student is pretested before each lesson with 90 percent set as mastery level. If mastery is not attained, the student is directed to the instruction and games to help him/her learn the vocabulary. The student is posttested upon completion. Five forms of each test exist. The courseware uses branching to permit reinforcement. An elaborate record-keeping system records and analyses responses, number of attempts, and response time. A file editor disk allows the instructor to monitor a student's progress as well as enter new material to supplement the courseware.

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A statewide evaluation study in parent literacy programs is being conducted in 1986-87. Low-literate parents of children in Chapter I programs are eligible to learn to read using the courseware. Effects of the intervention is being carefully measured and documented. Instruction is being carried out by the Chapter I teachers with local literacy councils assisting with recruitment. Technical assistance and teacher training is being offered by project staff.

## EVALUATION OF THE PENN STATE ADULT LITERACY COURSEWARE IN A CORRECTIONAL SETTING

An evaluation conducted during 1985-86 in a correctional institution indicated significant gains in word recognition, the time needed to recognize a word, and reading level (as compared to those taught by traditional methods.) Retention of vocabulary after a ten-month period of no intervention was at approximately 90 percent.

The subjects were eleven men from the Rockview State Correctional Institution at Bellefonte, Pennsylvania. These men were functioning below a third-grade reading level and were enrolled in Adult Basic Education classes at the prison. A single-subject multiple baseline design was used to evaluate the effect of the intervention across different word sets. Two forms of data were collected: number of correct responses on a thirty-item pre/posttest and the average amount of time required for a correct response. It was hypothesized that the number of correct responses would increase while the response time would decrease.

The data from the study demonstrated that for all eleven subjects both of these changes did occur. Ten of the men completed work on three word sets while the eleventh man completed only two word sets. In all of these instances, the data confirmed the hypotheses of the study.

## NATIONAL PROJECT TO INFUSE TECHNOLOGY INTO ADULT LITERACY PROGRAMS

The Adult Literacy and Technology project is funded by the Gannett Foundation and coordinated by the Institute for the Study of Adult Literacy at The Pennsylvania State University in behalf of the national Steering Committee on Adult Literacy and Technology. It is an attempt to answer the needs of adult literacy practitioners for information concerning present and potential applications of technology. The project has two basic missions:

1. Communication among educators about uses of technology and communication to the general public, especially business, to enlist support for technological applications in adult literacy.

2. Training for individuals working in adult literacy, including paid teachers, volunteer tutors, administrators, and counselors, in the uses of technology for instruction and program management.

To fulfill the goals of each mission, several projects have been planned for implementation in 1987. These are:

1. Training

   A. Technical assistance--consultants will be chosen for their expertise in using technology in person and over the phone to practitioners.

B. Training of consultants--a subcontract will be awarded to provide a training session and on-going consultation for consultants in order to provide a commonality of experience.

C. Training package--a subcontract will be awarded to develop a videotape and print materials to demonstrate uses of technology in adult literacy.

2. Communication

A. Software evaluation--a subcontract will be awarded for the purposes of evaluating current software and to develop a system for on-going evaluation.

B. National Conference--a conference will be held in early June 4-7, 1987, at Penn State to provide a format for sharing information about uses of technology in adult literacy.

C. Technology Network--a quarterly newsletter, Tech Talk, will be published to share information on technology in adult literacy programs.
In addition, the project will endeavor to promote use of the electronic bulleting board, Litline.

D. Evolving Technology--new forms of technology such as interactive video and voice synthesizers, will be monitored for possible applications to adult literacy.

# MEASURING ADULTS' ATTITUDES TOWARD COMPUTERS: AN INITIAL INVESTIGATION

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## Abstract

This paper describes the construction of an instrument for measuring the attitudes of adult learners towards computers. Since behavior is considered to be a function of one's attitude regarding a specific situation, this research was conducted to learn more about the feelings and perceptions that adult learners have about the new technology.

Anecdotal accounts and war stories abound that suggest adults are computer anxious. The term "technophobia" has been bandied about in educational circles to characterize one's fear of the new technologies. The use of such an epithet is underscored in feature articles in newspapers and magazines that sensationalize the phenomenon:

"Fear and Loathing at the CRT!"
(Desktop Computing, November, 1983)

"The Curse of Computer Anxiety"
(Real Estate Today, 1984)

"Do Women Resist Computing?"
(Popular Computing, January, 1983)

"Help for Technophobes"
(Ms. Magazine, January, 1985)

"How to Conquer Fear of Computers"
(Business Week, March, 1982)

"Computerphobia: Modern Malady Spawns
New Industry Offering Cure"
(L.A. Times, 1986)

Is computerphobia a real and widespread phenomenon? Are there differences in adults' attitudes towards computers based on selected variables such as age, sex, and educational level? Is there an unnatural degree of fear which can seriously inhibit one's ability to deal rationally with the idea of computers or to learn how to use one?

The original instrument measuring attitudes toward computers was revised and expanded to include a measure of anxiety. The new scales were reviewed by teachers and students in the target population. This included three classes of currently enrolled adult basic education students as well as instructors in two ABE programs. The resultant instrument contained 21 statements (6 negatively stated and 15 phrased positively). The first three categories were composed of five items each and six items described the final classification. A Likert scale with a 5-point response format was chosen, utilizing descriptors ranging from "strongly agree" (5) to "strongly disagree" (1).

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The pilot instrument, Adults' Attitudes Toward Computers (Adult ATC), consisted of the following four categories: General Interest (enthusiasm or lack of it regarding computers); Usefulness (the idea that computers are helpful); Action-orientation (intent to use a computer in the near future); Anxiety (apprehension about or fear of using computers). Sample item stems from each of these categories include: (1) "I am interested in computers"; (2) "I will need to learn how to use a computer in the future"; (3) "I would like to sign up for a class that uses computers"; and (4) "I am unsure of myself around computers".

## Construct Validity

Sample. A pilot study was conducted in an undergraduate education course at a university in Southern New England. The sample included 103 females and 23 males with a variety of experiences in using computers. Due to the unequal number of males and females, no attempt was made to compare responses based upon gender. This sample was chosen for its representativeness of adult learners. Subsamples for this study will be sought in the next phase of instrument analysis.

## Principal Component Analysis (PCA)

A PCA using Kaiser's criterion revealed a four component (components will be referred to as "factors") solution which accounted for 69.2% of the variation in the set of 21 items. Both the oblique and varimax rotations revealed that factors one (General Interest) and three (Action-orientation) overlapped considerably. It was also determined that item eight ("computers can be used to help me learn new skills") on the Usefulness scale should be rewritten or deleted.

The PCA was reanalyzed after excluding the Action-orientation category and item eight. Three meaningful factors were generated which explained 71.3% of the variance in 15 items.

Factor I which is identified as General Interest, pertains to the enthusiasm displayed when one considers the topic of computers. Subjects responding favorably to this factor would enjoy working with a computer and express interest in finding out more information about computers.

Factor II reflects perceived Usefulness of the computer. Respondents indicate whether or not they agree that computers would be helpful to them in the future.

Factor III, Anxiety, describes a subject's lack of confidence or fear of using a computer. Respondents with a high degree of anxiety indicate that they are uneasy around computers and are afraid to use them.

A landmark study by Booz, Allen and Hamilton, Inc., a management consulting company, suggests that one-third of all knowledgeable workers will be wary of the computer terminal rather than receptive to it (Business Week, 1982). Their research indicates that it is not age, per se, that is a variable in one's attitude toward computers but rather tenure in one's job. The longer an individual has spent with a company/organization, the more likely he/she is to resist computers than a person the same age who has changed jobs. Still others suggest that computerphobia is a middle class phenomenon which has been created by sensation-mongering journalism and has little basis in reality (Training, 1984).

Participant observation and daily interactions with a variety of adult constituencies allow for the identification of several observable and definable positions that people take with regard to computers. Some adults are aware of the technology but haven't as yet decided to take advantage of it. Others feel that computers have no advantage or relevance for them personally or professionally. Still others reject the hardware based on everything from the cost to the impersonal qualities of the technology. Conflicting voices, some negative and some positive, suggest that an internal debate goes on within the minds of many individuals as they grapple with the fact that if they can't adapt to the new technology, they will be left behind. The counterpoint to the aformentioned perceptions about computers is represented by highly motivated adults who are excited about the technology and who want to learn about and use computers as soon as possible.

## INSTRUMENT DEVELOPMENT

### Content Validity

The purpose of this research was to develop an assessment tool which could be used to measure attitudes of adults toward computers. Since behavior is considered to be a function of one's attitude regarding a specific situation (Triandis, 1971), this study was conducted to learn more about the feelings and perceptions that adult learners have about the new technology.

Several approaches were used to collect information prior to actual item generation. Severy (1974) describes three ways to conceptualize the nature of an attribute and to gather appropriate data. "This conceptualization can spring from a theoretical foundation, from a practical knowledge of the situation, or from interaction with other experts regarding the attitude" (p. 6). With this in mind, the measurement of adults' attitudes toward computers was based upon three categories of information: a 15 item instrument called Attitudes Toward Computers (ATC) (Delcourt, 1985) which was designed for use with middle school students; articles and curriculum guides; and interviews with teachers and students.

A major objective of the study was to construct an assessment tool which would be applicable to a variety of adult attitudes and experiences. A subgoal was to develop a questionnaire that could be used with individuals of varying levels of educational attainment and socio-economic status. This aspect of instrument development presented specific problems with respect to item readability, limiting the vocabulary selection.

### Reliability

An internal consistency reliability estimate of .87 was found for the entire survey. Reliability estimates for each of the three retained factors were .88 (General Interest), .82 (Usefulness) and .93 (Anxiety). These are satisfactory coefficients since an attitudinal measure with at least a value of .70 is acceptable (Gable, 1986).

## SUMMARY OF INSTRUMENTATION

Validating an instrument to reflect an attitude is an "unending process" (Nunnally, 1978, p. 87). The results of the Principal Component Analyses and the reliability analyses described earlier in this paper provide some evidence for supporting the validity of the Adult ATC. Since this was only an initial investigation, further studies are recommended.

Additional research is needed to discover the applicability of the scales to other adult samples and to examine the relationship between this instrument and other criterion variables. It is also recommended that the Usefulness scale be revised since one item was deleted and other items appear to overlap within the scale.

Research is presently being conducted to establish the stability reliability of the Adult ATC with respect to a group of adult basic education students.

## CONCLUSIONS

Because computers are rapidly becoming an integral part of our daily lives, it is necessary to insure that learners can adapt their behavior to the changing nature of learning and work environments. By determining individuals' attitudes towards computers, adult educators can identify the reasons students may be reluctant to utilize computers and accordingly develop appropriate classroom strategies that will facilitate the learning process. Conversely, by identifying learners who are anxious to use computers, educators can capitalize on student enthusiasm and motivation to promote computer usage and instruction.

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# ISSUES IN COMPUTERS AND ADULT LEARNING

Elisabeth Gerver (1)

## Abstract

Throughout the developed world, the use of computers for adult learning is increasing, but some adult educators have expressed scepticism about the relationship between computers and adult learners. This symposium will consider some of the implications of computer-aided learning for models of adult learning and for the health of democratic society. Issues to be explored include questioning the value of autonomous learning, limiting the damage of computer language and practices, and redressing the current gender imbalance in computing.

## INTRODUCTION

In Britain as in the rest of the developed world, the use of computers for adult learning is increasing. Their use includes applications in skills training; modelling and simulations; word processing; educational games; information databases; educational brokerage; problem-solving; support for the disabled; as well as electronic telecommunications used to support learning, such as computer conferencing and electronic mail. Initially, the use of computers for adult learning consisted mainly of individuals using learning packages to acquire new skills or to upgrade previous educational and training qualifications. More recently, new computer applications, such as those derived from community organisations and from research in artificial intelligence, have emphasised more co-operative and experimental models of learning and of interaction among people.

It appears that computers have an immense potential for opening up learning experiences and, indeed, for achieving many of the generally accepted goals of adult education and training. But the use of computers for learning also raises serious problems - in the practical realisation of their theoretical promises and in their implications for models of adult learning and for the health of democratic society. In this symposium I should like to discuss some of these implications with American colleagues. My comments, however, are not intended to cover comprehensively this rapidly developing field of enquiry and debate. Rather, drawing on research reports and, to some extent, on mere observation and speculation, my questions are intended to stimulate debate and discussion.

But first, some indication of how I shall use the terms "computers" and "adult learning". I shall use the term "computers" in a rough and ready fashion to cover the entire range of electronic information processing, including those applications which depend on telecommunications and which therefore conflate the two technologies. In my use of the term "computerised learning" I have included two main tendencies. Some of the comments about computerised learning relate mainly to computer-aided instruction, particularly that in which a computer is used as a substitute for a human tutor, often within the tradition of programmed learning. At other times computerised learning refers to computer-aided or assisted learning, where the computer is used as a resource or a tool rather than as the dominant teaching mode. Where necessary, I have distinguished between these two tendencies, but generally computerised learning includes both. By "adult learning" I mean all of those kinds of purposive, systematic learning in which adults engage in formal further and higher education as well as in non-formal adult education; it includes learning for both credit and non-credit (if I have understood the American distinctions correctly!).

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### The form and content of computerised learning

Computerised learning is a form of educational technology or distance learning; together with broadcasting, print, audio-visual cassettes, and the telephone, the use of a computer for learning does not presuppose the simultaneous presence of a tutor and students. Yet the technologically deterministic stance of much educational technology is anathema to many of the characteristics of liberal adult education.

In the first place, the development of many forms of distance education, including computerised learning, often starts with the available technology. There are many educational technologists who start from the availability of the equipment and then try to find uses for it; thus, Hawkridge (1983) asks, "Which are the devices and systems that belong to new information technology? What can we do with each?"

Secondly, the development of some forms of computerised learning has tried to create "content-free" structures. Thus, Bostock and Seifert (1986) argue for the production of "empty 'shell' programs, free of content but providing the analytical and inferential facilities into which tutors might insert their own material." The idea of an inter-connection between form and content has vanished.

Moreover, the use of computerised learning inevitably bears certain connotations for adults. For instance, learning how to word process or to program on a computer may make it very easy to correct errors and to try again for a desired goal, thereby enhancing the learner's confidence. On the other hand, as Knowles (1983) has suggested, the computer manual which he used as a novice in learning how to use his personal computer "violates many principles of adult learning; it is very pedagogical." Analogously, computers may make available a vast range of information (thereby encouraging choice) but usually refuse to allow any questioning of their authority (thereby denying the power of the learner).

QUESTION: What is the hidden curriculum of computerised learning for adults?

To a far greater extent than other educational technologies, the computer draws attention to itself as a medium of learning, because of its power and its enormous implications in social, economic and political life. Thus, there has been a large demand from adults for "computer literacy" (Radcliffe and Salkeld, 1983; Gerver, 1984; Bostock and Seifert, 1986).

The concept of computer literacy seems to consist of three broad strands: being able to recognise in a general way both the usefulness and the limitations of computers; being able readily to learn how to use computer programs; and being sufficiently aware of the ways in which computers are being and can be used so that one can make reasonably informed judgements about their effects. Part of learning about computers therefore involves learning about their implications for learning, while the more highly developed forms of learning by computers try to create awareness of the characteristics of the computer as a learning medium.

QUESTION: What are the significant connections between adults learning by and about computers?

### The language of computerised learning

In many learning encounters with computers friendly words form an unfriendly language; the remark "There's a worm in my Apple" is threatening in more ways than one! One problem is the dire shortage of computer professionals who know about adult learning. As Knowles (1983) reports, "the computer industry doesn't understand how adults learn....Software and manuals are geared to teaching us how the machine works rather than helping us learn how to use the machine to perform the real-life tasks we buy it to perform for us."

As well as the language used in learning by and about computers, the terms to describe their characteristics as learning media are also often suspect. Terms such as "individualised" and "interactive" abound in the literature (Lewis and Tagg, 1981, and Megarry et al, 1983).

These terms tend to create unrealistic expectations of programs designed uniquely for each individual, and capable of genuine dialogue with their users. The result is that many adult learners (and some adult educators too) have felt cheated by their computerised learning experiences in ways that they often find hard to specify (Gerver, 1984; Banks, 1986).

QUESTION: How can adult educators bridge the gap between computer professionals and the needs of adult learners?

### Goals in artificial intelligence and adult education

Starting with a wider vision of computerised learning as supported by developments in artificial intelligence, Papert (1980), O'Shea and Self (1983) and many others have argued that computerised learning can lead to a greater use of learning by discovery. They cite many persuasive examples of children whose learning has flourished through LOGO, a programming language derived from work in artificial intelligence. Learning in such a mode involves exploring possibilities, of seeing what happens when you try something and then what happens when you try something else instead. Learning thus becomes more creative, inventive, and self-reliant.

Adult educators would certainly wish to encourage their students to become more creative and inventive, but the differences between young and older learners may mean that Papert and his followers have less potential for adult learning than might at first appear. Adults, for instance, have much less time than children to devote to their learning, and so cannot afford the luxury of playing with possibilities rather than focusing on more specific and specified learning goals.

QUESTION: Is computerised learning by discovery as desirable for adult learners as it is attractive for younger learners?

Another argument used in favour of computerised learning, particularly that derived from artificial intelligence, is that it can help to develop autonomous independent learning; this too is the goal of most educational technologists (Hawkridge. 1983; Lewis et al, 1984-86). However, the implied disappearance of other learners and of a tutor raises serious issues. In the first place, the social context of much adult learning may form an important, desirable part of the learning experience; its elimination should perhaps be seen as a price to be paid for the other advantages of computerised learning rather than as a desired goal. Secondly, habituation to learning in the absence of other people may contribute to social isolation and even alienation. It may well be that autonomy and independence have been over-valued as goals, and that interdependence amongst people is at least as functional as well as being socially more desirable.

QUESTION: Should our goal as adult educators really be the development of autonomous independent learners?

## COMPUTERS AND DEMOCRATIC SOCIETY

### Adults' responses to computerised learning

One of the most striking characteristics of the use of computers for adult learning appears to be that computerised learning strongly motivates those whom it does not alienate. In many branches of education, there is ample evidence that using computers strongly motivates some learners. Often computerised learning appears to attract those very individuals who would otherwise be reluctant learners in compulsory education (Megarry et al, 1983; O'Shea and Self. 1983) and non-participants in adult and continuing education (Rostock and Seifert, 1986; Gerver. 1986a). The use of computers is thus a particularly attractive prospect to those adult educators who want to open up learning opportunities to traditional non-participants.

Alas. there is also substantial evidence that computerised learning may not attract and may even alienate other adult learners. In the Open University in Britain, for instance, there has been a relatively low take-up of computer-assisted learning in courses where it is offered, ranging from 15 to 40 % (Jones and Scanlon, 1981). Reporting on a project using computers for adult literacy and numeracy in Canada, Sharon (1984) found that "the learners who progress most easily with the self-directed learning materials often remain in the program for a longer time .... Some students, however, are unable to learn in this setting."

The characteristics of computers which contribute both to the attraction and to the alienation have been discussed by many commentators (Weizenbaum, 1976; Gerver, 1984 and 1986a; Turkle, 1984, among others). Factors involved in alienation include such problems as the high failure rates of computer systems, incompatibility amongst systems, expense, the premium placed on keyboarding skills, and the sometimes disastrous consequences of human error. Other, more deep-seated alienating factors include fear of the social, political and economic implications of computerisation, the extent to which the promises of the computer world grotesquely outstrip reality, the technological determinism of many computer professionals, and the often impenetrable language.

QUESTION: To what extent does alienation from computerised learning merely reflect many computer professionals' insensitivity to users' needs?

Those groups who tend most often to be alienated by computerised learning include women, older adults, the poor, and those with less education (Gerver, 1986a). These categories often over-lap, and there is evidence to suggest that poor, older women with little education are unlikely to be attracted to using computers for learning (Bernard, 1986). Concentration on computerised learning thus raises the possibility of creating a ghetto of disadvantaged adult learners in which computer illiteracy and alienation exacerbate other disadvantages.

QUESTION: Will more extensive use of computerised learning create an even larger ghetto of disadvantaged adult learners?

## The divisive tendencies of computerised learning

Although many adults have access to computerised learning, there is a notable tendency for the use of information technology to make the information-rich even richer and to widen the gap between them and the information-poor (Laver, 1980; Norman, 1981; Sieghart, 1982). These problems are being addressed by many community educators in Britain, where there has been a great deal of interest in ways in which community education can try to counteract the socially and economically divisive effects of many computer applications (Gerver, 1986a and b). Thus, computers are being used to provide social information about educational opportunities and welfare benefits, and to open up new learning opportunities for the disabled (Gerver, 1986b).

QUESTION: How far can adult educators hope to redress the undemocratic tendency in computerised learning?

## Gender inequality and computerised learning

In almost all facets of adult learning by and about computers there is serious gender inequality: women are significantly under-represented at all but the lowest levels of training and education (Gerver and Lewis, 1984; Gerver, 1986a). This pattern results from many complex, inter-locking factors including the socialisation of girls and boys, sex discrimination and sexual harassment in industry and education, and the fact that computers represent power, which is still held predominantly by men. But it is also true that some women reject many of the characteristics of the world of computing, including its tendencies towards technological determinism, its emphasis on military uses, its competitiveness, and the harsh conditions often imposed on women computer workers by their employers.

The many strategies that have been evolved to try to redress the under-representation of women in computing include the development of support groups for those committed to developing feminist computing, the creation of non-sexist software, and the mounting of public awareness campaigns. Perhaps the most important strategy so far has been the provision of women-only courses in at least the initial stages of education and training.

QUESTION: In what ways can adult educators help to redress the imbalance of women in computing?

There is a growing body of evidence that learning in mixed sex groupings disadvantages girls and advantages boys in computing and computer-related sciences (Gerver and Lewis, 1984; Gerver, 1986a; Zukas, 1986). Evidence beginning to emerge suggests that women learning about computers in single sex groups perform significantly better than women in mixed sex groups but men in single sex groups perform noticeably worse than men in mixed groups ( McArdle et al, 1986). This evidence of improved performance fits well beside the clear preference which many women express for such groups (Gerver, 1986a; Zukas, 1986). The fact that such provision may disadvantage men, however, may create concern.

QUESTION: What is the role of single-sex provision in encouraging females to learn by and about computers?

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# PREASSESSMENT OF ADULT STUDENT INTEREST IN RELATION TO SUCCESS IN INTRODUCTORY COMPUTER COURSES

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## Abstract

The findings of this study indicate that the preassessment of occupational interest is not a useful measure of academic achievement in educational courses in that occupation. Both a pilot study and this research indicate no significant correlation between these two variables.

## INTRODUCTION

The application of computers in government, business, education, and now in homes has grown rapidly in the last few years. Computers are moving into almost every phase of our lives, from controlling the fuel-flow of our automobiles to checking out our groceries. Adults working in office settings, classrooms, and industrial work settings are expected to learn how to operate computers and computer-controlled word processors, regardless of their previous experience or education. The rapid growth of computer usage has demanded that many people enter into the computer field who do not have a strong technical academic aptitude. It is also abundantly clear that we are uncertain about the aptitudes and skills necessary to succeed with this technology. Adults who are considering returning to school for additional education or vocational training are seeking answers to whether they have the skills or aptitude for studying computer science or other computer-related subjects. Basic computer courses and computer literacy courses are now among the most popular courses at adult/vocational educational institutions.

There are a variety of measurement instruments that have been developed to measure the amount of interest people have in various occupations. Cronbach (1970) states that interest inventories are closely related to aptitude tests whose main use is in vocational and educational guidance. An interest category represents a working hypothesis about activities that in some way appeal to people with the same interests. According to Cronbach (1970) the oldest forms of occupational interest surveys in the United States began with the work of E.K. Strong, Jr., in the 1920's. His work resulted in the Strong Vocational Interest Blank for Men (SVIB), and later in the Strong-Campbell Interest Inventory (SCII). The oldest and one of the most widely used interest inventory is the Strong Vocational Interest Blank (SVIB). The inventory gives various choices of activities and amusements and hobbies, and the respondent is to decide if he likes, dislikes, or is indifferent to the items. Scoring on the test is done in terms of agreement with the responses of persons working in a given vocation, i.e., if a person gives responses on the SVIB similar to those of a police officer, it is inferred that his interests resemble theirs; he will, therefore, fit in this type of job adequately. Scales of various occupational groups were built empirically by comparing the responses of persons in a given occupation with responses of a general population sample. For example, the Strong Campbell Interest Inventory lists an amusement such as "Golf," and asks the student to respond if he likes, dislikes, or is indifferent to the amusement.

G. Frederick Kuder published the first form of his occupational interest instrument in the 1940's. Kuder has been one of the researchers most responsible for much instrument development and research on vocational interests. Successive versions of the same instrument have been given different names such as: Form C, CM, CH, Kuder Preference Record-Form E, and the General Interest Survey. Both the Strong and the Kuder tests have recently been revised to include both men and women in the survey, as well as updating their occupational information in the survey. The Kuder test was revised in 1979; the latest version is the Kuder Form DD Occupational Interest Survey (OIS). The Strong test was updated in 1981; the latest version is the Strong-Campbell Interest Inventory (SCII). One of the reasons for the recent revision of these two tests was to bring them into compliance with the recent changes in the law. Title VII of the 1964 Civil Rights Act as amended by the Equal Employment Act of 1972 is the basis for sweeping reforms in employment practices. The use of test results as a basis for employment decisions requires validations for the tests for minorities and females, according to equal employment guidelines.

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The major differences between the Strong and Kuder interest inventories are:

1. In the Kuder Preference Record, the examinee is forced to choose a most and least liked activity, whereas in the Strong inventory there is the opportunity to express the attitude of indifference.
2. In the Kuder, all items describe activities; the Strong lists occupations, school subjects, and amusements.

According to the Great Lakes Assessment Council (1973) both the Kuder Preference Record and the SVIB yield scores that are reasonably reliable for the purposes of personnel selection. Cronbach (1975) claimed the basic reason for differences in correlations across the two inventories is that the internal keying procedures of the two inventories differ. Cronbach states that a person can only truly learn what a scale means by "living with it." He found the Kuder Form C to have modest agreement with the SVIB. Correlations of above 0.60 were found in the scientific-technical area; also in business detail vs clerical, and in business contact versus persuasive. But Strong social-service keys correlated less than 0.40 with Kuder Social Service. These earlier tests emphasized male examinees.

The essential characteristic of an occupational interest inventory is its ability to differentiate between occupational groups; its validity depends on good discrimination. The method devised by Strong in the 1920s and described in the 1959 manual for the SVIB - the use of a general reference group as the basis for weighing items so as to differentiate between occupational groups - has become an integral part of measurement theory and practice. People traditionally have found the greatest satisfaction in an occupation in which the characteristic interest pattern of those in the occupation was compatible with their own. With an increasing number of women entering occupations traditionally dominated by males, it is important to note how closely the characteristic interest patterns of women in an occupation resemble those of their male coworkers. Hornaday and Kuder (1961) found that for nine out of ten occupations studied, keys developed on male groups differentiated about as well as for women as they did for men.

Previous studies of correlations between different types of interest inventories have not found a high degree of correlation. When a fairly large sample of college men took Strong Vocational Interest Inventory (SVII), Minnesota Vocational Interest Inventory (MVII), and Occupational Interest Survey (OIS), the corresponding scores were often quite low, when compared to significant correlation levels of 0.95 for many educational studies. Median scores for several seemingly similar scales were 0.25 for SVIB vs. OIS and 0.19 for OIS vs. MVII (Minnesota Vocational Interest Inventory). At one extreme, sales managers' scales of two instruments correlated 0.07; at the other extreme, the correlation for two carpenter scales was 0.49 in 1968. This cannot be fully explained. It may imply serious weaknesses in the instruments (Cronbach, 1970).

The problem confronting those responsible for interest inventories is how to work with the differences that do occur--so that the unique qualities of every individual of either sex can be addressed by the scoring system--without using the group differences to restrict the choices of any one person. Most of the work which has been done on occupational interest surveys was done from an empirical base rather than a theoretical one. Educational theorists have, nonetheless, expressed interest in the importance of vocational and occupational choices.

Hesburgh (1973) credits vocational studies which promoted the interests of industry, which was able to provide economic and political support, as a matter of major significance to the advancement of the land grant colleges. Also, during the past two decades Higher Education continuing education has become a conduit for the transfer of knowledge from the campus to the community, where it is then applied to problem-solving. The changes in the relationships of institutions to communities bring into sharp contrast the traditional elitist functions of universities. For two hundred years, colleges and universities emphasized the teaching of traditional students and the pursuit of scholarship. In the past three decades, higher education has joined vocational and professional schools as an instrument of mass education, bending and altering to provide some degree of success to nearly every student, and developing programs of community service.

Occupational choice, according to Erikson (1968), influences other aspects of our lives more than any other single factor. Our job determines how we will spend a sizable portion of our time; it determines how much money we will earn; and our income, in turn, determines how and where we live. These last two factors determine, to a considerable extent, the people we interact with socially. All these factors together influence the reactions of others, and these reactions lead us to develop perceptions of ourselves. The choice of a career, therefore, may be the biggest commitment of a person's life. Erikson (1968) notes that occupational choice is particularly difficult in America because of our belief in technology, the efficiency of the assembly line, and corporate organization, all of which limit individuality. Other complicating factors are the amount of training needed for many jobs in a technological society, the rapidly changing job market, and the fact that many individuals compete against each other for desirable jobs.

In the first stage of this research, a pilot study was conducted to test correlation between the Occupational Interest Survey test results and course examination scores of one class of adults enrolled in a basic computer course. Results of the pilot study indicated significant correlation was found in two areas:

(1) High occupational interest in computer programming versus high test scores in the class.
(2) High educational interest in mathematics versus high test scores in the class.

The pilot study indicated there was sufficient justification to demand examination of the relationship between these two variables in relation to success in computer courses. The students who participated in the study were volunteers from classes taught by two different instructors. Sixty students from a total of approximately one-hundred enrolled in the two different classes volunteered to complete the Strong Campbell Interest Inventory (SCII) and participate in the study. The two instructors each gave one hour of class time for their students to complete the SCII, and provided the information on course grades for each student. The grading system of the particular institution has three levels of passing grades for the course. There are no failing grades given in the course. Instead, a student who does not obtain a passing grade receives a "W" corresponding to "withdrawn," and has the opportunity to take retests or repeat the course until a satisfactory grade is obtained. Four examinations are given during the course. Each student has the opportunity to take one or two retests of each examination. The final course grade of MH (High Mastery), M (Mastery), or CR (Credit) is determined, not by an average, but by the lowest of the best scores made on any test taken, whether it is the first attempt or a retest. Thus the course grade is determined by a single test score; the lowest of the best scores, including retests, for any of the four examinations. The last examination of the course was called the "final" examination, which dealt primarily with the subject matter given since the previous test, but the "final" did not include questions over a percentage of the material covered throughout the course.

The Strong Campbell Interest Inventory (SCII) was administered to the students in two different groups of thirty each. It took approximately one hour for completion, although many students finished in less than an hour. Students were free to ask questions to clarify the meaning and intent of the instrument. The SCII was administered during the last two weeks of the course, in order to minimize the impact on class instruction, and also to insure that the students participating in the study would complete the course, and thus provide meaningful data for the study. During the last two weeks of the course, all of the required examinations had been completed except for re-tests.

In the pilot study, due to the smaller sample size and the relatively even distribution of both numerical course grades and SCII scores, it was possible to use individual scores for each student to compute the correlation coefficient. A different method was necessary for the final study due to the large number of tied scores, particularly at the upper end of the scale. One of the basic assumptions for computing rank-order correlation is there cannot be large numbers of tied scores. The students were grouped into the three criterion groups of MH, M, and CR and computer rank-order correlation of the average SCII score for each of the three groups, using the Pearson rank-order correlation coefficient. The use of an average score necessitated an additional test to determine if the distribution of scores about the average score was closely grouped enough to represent valid data, or if the distribution was so widely dispersed that the mean did not truly represent the group within statistical significance. The Kruskal-Wallis test was chosen to test this parameter. It seems highly appropriate since it is designed to test for an identity of three or more population distributions about their individual means rather than a single central tendency for the several populations. The Kruskal-Wallis test uses rank-order scores for the entire group of data and means for each sub-group. The intent is to find out how much variation is so great that it would be unlikely to result as a consequence of random sampling variation. The Kruskal-Wallis test proceeds on this basis, examining the magnitude of the discrepancies between mean and subgroup rank and overall mean rank, and finally comparing the total magnitude of the discrepancies with what might be expected by chance. See Minium (1978) for a complete discussion of the test.

Four specific research questions were tested. Is there a significant correlation between educational interest in mathematics, as measured by (SCII) and course achievement, as measured by mastery level among adult men? Is there a significant correlation between educational interest in mathematical and course achievement among adult women? Is there a significant correlation between occupational interest in computer science as measured by the (SCII) and course achievement, as measured by mastery level among adult men? Is there a significant correlation between occupational interest in computer science and course achievement among adult women?

### SPEARMAN'S RANK-ORDER CORRELATION COEFFICIENT FOR SCII AVERAGE SCORES - MATHEMATICS INTEREST FOR MALES

| Group | Numerical Rank (RX) | SCII Average | Numerical Rank (RY) | D=Rx-Ry | $D^2$ |
|---|---|---|---|---|---|
| MH | 1 | 56.5 | 1 | 0 | 0 |
| M | 2 | 52.5 | 2 | 0 | 0 |
| CR | 3 | 51.8 | 3 | 0 | 0 |
| $r_s=1$* | | df=1 | | Summation of $D^2$ = | 0 |

* a coefficient of 0.988 or larger is required for significance at the 0.1 level. A post-hoc Kruskal-Wallis test, however, did not suport that conclusion.

### SPEARMAN'S RANK-ORDER CORRELATION COEFFICIENT FOR SCII AVERAGE SCORES - MATHEMATICS INTEREST FOR FEMALES

| Group | Numerical Rank (RX) | SCII Average | Numerical Rank (RY) | D=Rx-Ry | $D^2$ |
|---|---|---|---|---|---|
| MH | 1 | 48.8 | 1 | 0 | 0 |
| M | 2 | 46.6 | 2 | 0 | 0 |
| CR | 3 | 41.8 | 3 | 0 | 0 |
| $r_s=1$* | | df=1 | | Summation of $D^2$ = | 0 |

* a coefficient of 0.988 or larger is required for significance at the 0.1 level. Although the Spearman Rank-Order Correlations indicate significance at the 0.1 level, a post-hoc Kurskal-Wallis test however did not support that conlcusion.

### SPEARMAN'S RANK-ORDER CORRELATION COEFFICIENT FOR SCII AVERAGE SCORES - COMPUTER PROGRAMMING INTEREST FOR MALES

| Group | Numerical Rank (RX) | SCII Average | Numerical Rank (RY) | D=Rx-Ry | $D^2$ |
|---|---|---|---|---|---|
| MH | 1 | 37.6 | 2 | 1 | 1 |
| M | 2 | 43.4 | 1 | 1 | 1 |
| CR | 3 | 33.8 | 3 | 0 | 0 |
| $r_s=0.5$* | | df=1 | | Summation of $D^2$ = | 2 |

* a coefficient of 0.988 or larger is required for significance at the 0.1 level. A Kurskal-Wallis post-hoc test was not needed.

## SPEARMAN'S RANK-ORDER CORRELATION COEFFICIENT FOR SCII AVERAGE SCORES - COMPUTER PROGRAMMING INTEREST FOR FEMALES

| Group | Numerical Rank (RX) | SCII Average | Numerical Rank (RY) | D=Rx-Ry | $D^2$ |
|---|---|---|---|---|---|
| MH | 1 | 34.0 | 2 | 1 | 1 |
| M | 2 | 35.9 | 1 | 1 | 1 |
| CR | 3 | 31.2 | 3 | 0 | 0 |
| $r_s$=0.5* | | df=1 | | Summation of $D^2$ = | 2 |

* a coefficient of 0.988 or larger is required for significance at the 0.1 level. A Kurskal-Wallis post-hoc test was not needed.

The findings of this study did not support the research questions as stated. The researchers reasoned that, based on the pilot study and the wide acceptance of the SCII, there would be stronger correlation, especially in the areas of mathematics for women, and in computer programming for men. The strongest correlation found was in the area of: educational interest in mathematics for women. This correlation was not significant at the 90% confidence level but it was significant at the 70% confidence level which is still a good indication of probable results at least based on averages for groups, if not as an indicator for each particular individual. The second strongest correlation found was in the area of: educational interest in mathematics for men. This correlation would have been significant at only the 30% confidence level. The data for the other research questions did not come out in the proper rank order for any meaningful significance, because those students in the middle range of course grades, scored the highest on the SCII scores.

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# SELF-INITIATED LEARNING PROJECTS OF PRISON INMATES OF THE DISTRICT OF COLUMBIA DEPARTMENT OF CORRECTIONS

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## Abstract

This study systematically examined and described the self-initiated learning projects of 20 inmates who were randomly selected from the Central Facility of the District of Columbia Department of Corrections. The respondents in the sample were interviewed by the investigator who designed and used a 29 item semi-structured interview schedule. The study concluded the following: Self-initiated learning projects abound in prison as meaningful learning activities for the inmates. Self-initiated learning projects are beneficial to the inmates. Finally, self-initiated learning projects in the prison setting are not generally conducted in a positive and supportive environment.

## PURPOSE

While incarcerated in a penal institution, prison inmates may be involved in a variety of learning activities. Some of these learning activities are sponsored by the prison authorities. They are designed to meet the learning needs that have been defined by the prison officials as being important to the inmate either after release or for institutional needs. In addition, scattered findings and observations have indicated that inmates are involved in self-initiated learning projects. There is, however, limited information available on the self-initiated learning projects of inmates. This study examined the self-initiated learning projects of selected inmates of the District of Columbia Department of Corrections. The purposes of this study were (a) to define the characteristics of the learning projects which inmates have initiated on their own while incarcerated and the motivating factors which impelled them to engage in each project; (b) to describe the impact of the prison environment on self-initiated learning as perceived by the inmates; and (c) to describe the meaning that the self-initiated learning have for the inmates both while incarcerated as well as after release.

## REVIEW OF THE LITERATURE

Since the early 1970's, a number of studies have attempted to document the self-initiated learning activities of adults. Many of these studies have used the learning projects definition of Tough (1968, 1971, 1978, 1979) to determine the nature and extent of the learning activities of adults. In the initial study conducted by Tough, the respondents conducted an average of more than eight learning projects. Seventy percent were initiated by the learners themselves. These findings have been corroborated by at least forty researchers who have studied various populations of adult respondents. Despite the variety of populations studied, few attempts have been made to study self-initiated learning projects of inmates in penal institutions.

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Inmates are involved both in learning programs sponsored by the institutions and self-initiated learning projects. The institutionally sponsored learning programs typically consist of adult basic education, high school equivalency, vocational, higher education programs, special interests programs, religious and psychological guidance programs, and organized activities (Cloward, 1977: Johnson, Shearon, & Briton 1974; Reagen & Stoughton, 1976; Roberts, 1973).

The self-initiated learning projects are not as well documented as the sponsored learning programs. Some scattered findings such as those of Gaddis (1962), Haley and Malcolm X (1979), and Rembiszewski (1974) have indicated that inmates do initiate learning projects. Some of these have been in areas such as adult basic education, communication, ornithology, family relations, physical fitness, and administrative skills.

In general, research findings indicate that learning programs are beneficial to the inmates who participate. Most studies, however, have focused on the sponsored programs. Theoretically, self-initiated learning should also be beneficial to the inmate participant; however, there is limited documentation on inmate involvement in self-initiated learning.

## DESIGN AND METHODS

The purpose of this study was to provide an understanding of self-initiated learning projects in a prison setting. Accordingly, the study design is naturalistic, and as such is aimed at discovering, explaining, and understanding phenomena. More specifically, it addresses the inmates' perceptions of their learning projects and the meaning these have for them.

The sample for this study consisted of 20 inmates who were randomly selected from the Central Facility of the District of Columbia Department of Corrections. The data collection methods for this study included an interview guide, some observations, and the investigator's introspections. The interview for this study consisted of a twenty-nine item semi-structured guide designed by the investigator. In addition to collecting data from interviews, fieldnotes of the investigator's observations before, during, and after each interview were kept.

Ethnographic analysis was used to analyze the data for this study. According to Spradley (1980), ethnographic analysis consists of four steps: (a) domain analysis, (b) taxonomic analysis, (c) componential analysis, and (d) theme analysis.

A domain analysis is defined by Spradley as a systematic procedure for determing the categories of meaning in the data. A culture domain consists of a "cover term," "included terms," and a "semantic relationship." The second step in ethnographic analysis is taxonomic analysis. According to Spradley, a taxonomic analysis is a means of organizing the "included terms discovered in the domain analysis by their similarities. The third step in ethnographic analysis according to Spradley's scheme is componential analysis. This step provides a systematic way to arrive at the specific attributes of a category and, subsequently, a domain. The final step in ethnographic research is discovery of themes. Cultural themes are defined "as any principle recurring in a number of domains, tacit or explicit and serving as a relationship among subsystems of cultural meaning" (Spradley, 1980, p. 141).

## FINDINGS

The inmates engaged in thirty-eight self-initiated learning projects during the study period. The central theme of the self-initiated learning projects was growth and development in regards to personal development, religious training, occupational training, and general education. Before starting the projects the respondents considered their qualifications, material resources, their availability, and the environment. In conducting the projects, they needed both human and material resources. Some of the resources needed were made available by the prison, and others were made available by volunteers from the community. These two sources, however, did not supply all of the resources perceived to be needed by the respondents in conducting the projects. The respondents used several different learning formats in conducting their learning projects. The main one used was talking to other people. They referred to this as "old fashioned communication." The category of "old fashioned communication" includes verbal and non-verbal forms of communication such as talking listening, watching, and interacting with others.

The inmates indicated that their self-initiated learning projects were facilitated by the "liberal policy" and "loose knit structure" at the prison. The subcategory of "liberal policy" refers to the policies, procedures, and practices of the administration relevant to such matters as the receipt of material, approval of outside guests to enter the facility, and freedom of movement. The subcategory of "loose knit structure" refers to the structure of the prison or the nature of the general setting of the prison as an unstructured environment that they characterized as "negative" and "brutish," and one which "perpetuates aggressiveness." This situation caused some of the respondents to fear for their personal safety, but others were motivated as a result.

The respondents also encountered some problems and frustrations in conducting the learning projects. The central theme of the problems and frustrations encountered was the lack of adequate support. This theme has three subcategories: "mentality of men," "inadequate study facility," and "not having resources." The subcategory of "mentality of men" refers to the non-favorable attitudes of other inmates toward the respondents as they conducted the learning projects. The subcategory of "inadequate study facility" refers to the prison as not being conducive for learning. The subcategory of "not having resources" refers mainly to inadequate equipment, supplies, and books needed for the projects.

The inmates received numerous benefits from the learning projects while incarcerated. The central theme of these benefits was the positive role they played in the respondents' institutional adjustment. This theme has three subcategories: "opened up a few doors for me," "changed my attitude," and "helped me to do this time." The subcategory of "opened up a few doors for me" refers to new opportunities resulting from the completion of the learning projects. The subcategory of "changed my attitude" refers to the impact that the project has had on the ways the respondents presently think and conduct themselves. As a result of completing the projects, the respondents felt their attitudes toward people and themselves had changed. The subcategory of "helped me do this time" refers to the specific assistance the respondents received from the projects in helping them serve their present sentences.

The respondents expected to receive various benefits from the projects upon release. The main theme was "opened up a few doors for me." Here the subcategory of "opened up a few doors for me" refers to opportunities after release. As a result of completing the projects, the respondents felt that they could be productive family members in particular and citizens in general. In addition, the inmates said the process would benefit them in a variety of ways after release. The central theme of the benefits was an attitudinal change which they referred to as "it will help me be a better person." This category refers to a change in attitude of the respondents relative to such areas as "discipline and high morals," "character," and attitude toward life in general.

From the analysis of the data for this study, the following conclusions pertaining to self-initiated learning were drawn. Self-initiated learning projects abound in prison as meaningful learning activities for the inmates which tend to supplement the institutionally sponsored programs. Self-initiated learning projects have benefit and value for inmates while they are incarcerated and an expected benefit and value for inmates after they are released. Finally, self-intiated learning projects in the prison setting are not generally conducted in a positive and supportive environment. The learning projects were affected by the environment in at least four different ways. One of these was the absence of resources.

The implications of the study are as follows: Previous studies in the literature on self-initiated learning focused primarily on the characteristics of the learning projects. This study added two other dimensions by focusing on the impact of the environment on the learning projects and the meaning of the projects. The prison can also benefit from self-initiated learning since the study revealed that self-initiated learning does not compete with the sponsored programs at the prison, but instead, it supplements the programs that are offered. Finally, the prisoners benefit from self-initiated learning. The respondents are now better able to document what they have learned on their own and discuss these activities with their counselors, the prison administration, and the Parole Board.

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# ROLE OF THE ADULT EDUCATOR IN THE PRISONS: A CRITICAL PERSPECTIVE

Michael Collins[1]

## Abstract

This study describes the situation confronting prison educators and the accommodative strategies they are obliged to adopt. At the same time, it presents a paradigm case for critical reflection on adult education practice in general. In examining the structures of power and surveillance so immediately present in the prison setting, we become alert to the more subtly applied, often unacknowledged, forces that militate against the genuine application of adult education principles on the outside.

## Contradictions

> People are sent to prison as punishment, not for punishment.
>
> - Warden, Federal Penitentiary,
> Prince Albert, SK CANADA

> The penitentiary operation, if it is to be a genuine re-education, must become the sum total existence of the delinquent, making of the prison a sort of artificial and coercive theatre in which his life will be examined from top to bottom. The legal punishment bears upon an act; the punitive technique on a life.
>
> - Michel Foucault
> Discipline and Punish: The Birth of the Prison

## INTRODUCTION

While this paper focuses on the situation of adult educators in the prison, it has direct relevance for the practice of adult education in other arenas of today's society. The prison constitutes an extremely difficult environment for facilitating a learning process that is remotely in line with principles so often evoked in adult education literature. In the everyday life of the prison, inmates and staff continuously come up against the hard consequences of formalized and non-formalized inequality of power relations and of inherent systemic contradictions. These consequences are experienced more immediately, and in a more exacting form, than is typically the case on the outside (unless, of course, legitimized power structures are assailed in confrontative and sustained manner). Prison educators, then, are less likely to be deluded than colleagues on the outside about the extent to which they can facilitate genuine self-directed learning and promote other worthy adult education principles that do not necessarily (nor even sensibly) correspond to institutional and societal constraints. Their situation bears examination from thoughtful adult educators on the outside because it reveals vividly the real constraints on the practice of adult education that obtain for all of us in today's society. Our experience of these constraints on practice within societal settings on the outside is not so intense and immediate, but they are there and need to be taken into account.

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Accordingly, unless he or she has adopted the immoderate optimism of a modern day Pangloss, even the most enthusiastic buff of self-directed learning cannot fail to recognize that forces which militate against adult education practice in prisons are operative, though less forcefully, on the outside. Other adult educators, less sanguine, might see a closer correspondence between the predicament of prison educators and their own, leading to an identification of the delusions entertained about the nature and prospects of genuine self-directed learning, that most sancrosanct of adult education principles, within institutional settings.

This short essay provides initial and tentative grounds for substantial critical analysis of adult education practice in the prisons and in society at large. For adult educators on the outside who are not set on shying away from a critical perspective on their own practice, the situation of adult educators in the prison presents a paradigm case.

I intend to proceed with a brief account of critical environmental factors which impinge on the practice of adult education in the prisons. This is followed by a sketching out of some leading models of corrections education with reference to their underlying motivations and ideology. Finally, I will make some tentative suggestions for strategies that might be adopted in light of the analysis.

## THE PRISON ENVIRONMENT

Few on the outside can fully understand the situation, but it is widely acknowledged that modern prisons (more especially, maximum security institutions) constitute an anomic, hostile, and dangerous environment. The need for security takes precedence. Surveillance, and the mechanisms which support it, is all pervasive. It serves to impose security checks, control movement, and prevent group cohesiveness among inmates (especially), and among staff. The clear-cut hierarchical structure of the prison ensures the efficiency of this function, and so does the architecture of the prison wherein people can be watched without seeing the observer. Numerous modes of accountability are integral to everyday life in prison. Copious records are kept on inmates, and prison staff are subject to more accountability checks than employees in agencies on the outside. This ever watchful, mistrusting environment, designed to individuate and control its population, infiltrates the entire educational endeavor. It shapes the context in which adult literacy programs, technical-vocational courses and, to a far lesser extent, university classes are delivered by educators of the prison service and those hired on a contract basis from outside agencies. The latter soon become oriented to the mechanisms of constant surveillance so graphically described by Michel Foucault (1977) as panoptic technique.

In such a context the following observation by outside researchers is scarcely surprising:

> The central goals of adult education, especially the development of self-directed, goal-oriented learning and the generation of intellectual curiosity and critical thinking, may be subverted in a variety of ways (Goldin and Thomas, 1984).

## MODELS OF CORRECTIONS EDUCATION

This brings us to a consideration of the contradictory situation whereby the convicted person is regarded as both offender and delinquent. Contrary to the commonly expressed sentiment quoted at the onset of this paper, punishment extends beyond what is meted out as just retribution for the offence. In turning offenders into delinquents for corrective treatment (well intentioned though it may be), the prison apparatus, and its personnel intent on correction, ensures that people are sent to prison for punishment, not just as punishment.

Correcting delinquent behavior has been at the core of the modern prison since the outset and, of course, in that regard it has been a demonstrable failure all along. According to Foucault (1980), "the prisons, far from transforming criminals into honest citizens, serve only to manufacture new criminals and to drive existing criminals even deeper into criminality." Despite this failure, education and training in prisons remain caught up with a psychiatric ethos intent on defining delinquency and prescribing normalcy. It is not sufficient for prison educators to justify their work solely in terms of educational benefits. Their programs are expected to address problems of delinquency, the criminal mind, and cause a reduction in the rate of recidivism. (The problems of delinquency, "criminal minds", and recidivism came along with the modern prisons and psychiatric practice).

In the pursuit of correcting delinquency and reducing the recidivism rate, a number of corrections education models have enjoyed official backing. The "medical model", derived from the ideology of medical practice, envisages criminality as being caused by individual psychological deficiencies of the offender that are amenable to fixing through behavior modification. While the medical model does come in for some questioning these days, psychological (treatment oriented) terminology, and its attendant cadre of professionals, still maintains a strong presence within the prisons. (In fact, since the birth of modern prisons, a professionalized cadre founded on an entire specialized lexicon of psychiatric terms has become well entrenched around a reified notion of criminality). It exerts an enormous influence on the nature of discourse within prisons (Collins, 1986) and, consequently, on the rationale derived for the design of inmate programs.

An alternative scheme for corrections, the opportunities model, appears to confer on education and training a more central role. It represents an intention of making available to inmates a wide variety of educational and training options, de-emphasizing (if not entirely abandoning) the need to evoke reduction in the rate of recidivism as a prime criterion for assessing program merit. Unfortunately, the prominence granted to the trades within the opportunities model is undermined by economic and political realities that are apparent to staff and inmates alike. These realities include the facts that the marketing of products manufactured by inmates is not acceptable, and that (especially under prevailing economic circumstances) job opportunities to match technical-vocational skills acquired in prison trades programs are not readily available to inmates on release. The opportunities model is little more than a recipe for keeping inmates busy and sustaining the efficiency ("good order") of the institution.

Recently, a cognitive deficiency model of corrections education has come into vogue. It operates on the assumption that shortcomings in inmates' way of knowing (cognitive structure) and acting are associated with the perpetration of inappropriate actions which cause harm and injury to others. Accordingly, the cognitive deficiency model underscores the ethical dimension of education in prisons, providing a practical alternative to the fixing techniques of a behavioral psychology that characterizes the medical model.

According to advocates of the cognitive deficiency approach, required practical reasoning skills as a source for moral improvement (borrowing from Lawrence Kohlberg's stages of moral development theory) are to be found in liberal arts subjects such as history, literature, and philosophy (Duguid, 1983). Apart from the fact that the model gives short shrift to the posibilities of an ethical dimension emerging from serious study of technical-vocational subjects (Collins, 1986), the cognitive deficiency model affirms the status of the inmate as delinquent and dutifully serves the purposes of a prison apparatus set up to control inmates as receptacles of a reified criminal mind amenable to correctional treatment. Results of research studies conducted to demonstrate a causal link between participation in educational programs based on the cognitive deficiency model and a reduction in the rate of recidivism (Duguid, 1983) are highly questionable because of inevitable problems entailed in accounting for key variables over an acceptable length of time (Collins, 1986). Such studies serve only to underscore the extent to which education in the prisons is so readily subverted by the prison ethos. This ethos calls for the continuing treatment of carefully watched delinquents rather than for an education on behalf of mainly young adults serving out a legal punishment (incarceration) for a specific crime. The education and training establishment has accepted that people are not sent to prison as punishment since it assists with the on-going punish and discipline procedures of the institution.

It is apparent, then, that prison educators have tended to embrace accommodative strategies, often in a taken-for-granted fashion, to play out their ambiguous role within the immensely difficult environment of the modern prison.

## CONCLUSION

There is insufficient space in a conference proceedings to pull together all the threads of the analysis, so implications and recommendations are presented here in point form.

1. Adult educators on the outside can benefit by referring to the situation of colleagues working in the prison as a paradigm case for realistic analysis of their own practice.

2. Educational staff should undertake a careful critical analysis of the nature of power structures within the prison and how it exerts influences on their actions, and those of inmates.

3. Strategies should be devised to gradually disengage education and training from the parameters of the delinquency (treatment) syndrome and the obligation to justify programs in terms of reduction in recidivism claims.

4. As part of 3, above, educators and trainers should take the initiative in identifying criteria to assess the benefits of worthwhile education programs. Testing and continual access to records (part of surveillance) can be minimized.

5. While recognizing that the techniques of surveillance cannot be completely decoupled, prison educators can endeavor to ensure that their programs become the exemplary context for civil human interaction within the institution. Deliberate efforts can be made to facilitate genuine democratic participation in adult learning classes with a view to enhancing communicative competence. (Mezirow, 1981; Collins, 1985).

6. Since the prison tends to curtail the amount and quality of interaction among staff as well as inmates, it is recommended that prison educators participate, from time to time, in adult residential education away from the penitentiary to study and reflect together on their vocational role. Such a setting has been provided on an annual basis since 1983 at the Prairie Institute for Corrections Educators at Emma Lake, Saskatchewan.

7. The strategies adopted by prison educators who understand the debilitating effects, and yet manage to counter them with some degree of success, merit further exploration. (What qualities sustain them and give them energy?).

In giving due attention to circumstances within the prisons that conspire to negate the prospects for adult education, adult educators on the outside are more able to identify structures of power, techniques of surveillance, and reified concepts of inadequacy which detract from their own work. The prison is more than just another potential arena for the modern practice of adult education. It is a paradigm case for all thoughtful adult educators that highlights, in far sharper relief than on the outside, the forces impeding all determined attempts to carry through principles of adult education in today's society.

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# DISTANCE EDUCATION: PRACTITIONERS' PLEAS FOR RESEARCH

## INTRODUCTION

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We in North America are experiencing extraordinarily high rates of technological change. Because of this technological revolution and the increasing life span of our people, the knowledge and skills of much of the adult work force, acquired as youngsters, have become obsolete. These factors, coupled with fierce and growing international economic competition, confront us with a major challenge.

To deal effectively with this challenge, we must create regular, ongoing systems of higher education that will provide adults with easy access to flexible, high quality educational programs throughout their lives. To wait until a particular industry is about to be "downsized" because of competition and technological change and to create crash programs to retrain displaced workers is expensive and frequently ineffective. Moreover, it is reactive rather than proactive and will leave our destiny in the hands of others.

If we are to take charge of our own lives, our governments, institutions of higher education and business, industry and labor must work together to develop and support true, comprehensive life-long learning systems and programs. Distance education programs can be a very important component of such life-long learning systems. Unfortunately, however, the development and growth of major, comprehensive distance education systems in the United States has lagged far behind Australia, England, West Germany, Holland, Japan and some Canadian provinces, not to mention developing countries such as Thailand, Indonesia and Costa Rica.

While there are many causes for the slow development of distance education in the U.S. and six of Canada's provinces, I would argue that one of the reasons for this phenomenon is the lack of solid research studies on distance education--studies, the results of which might be used to create more effective programs as well as winning over conservative faculty, administrators and government officials who believe one can obtain a quality university education only through three or four years of full-time residential study at a selective admissions research university or prestigious liberal arts college. The current state of research in distance education is well described by Joyceline Calvert of the Open Learning Institute in British Columbia. "...The opinions of both supporters and detractors about many aspects of distance education are based largely on intuition, unsupported assumptions and casual observations" (quoted in Ian Mugridge's paper).

One of the reasons for the paucity of sound research on distance education is the lack of communication between researchers, who might be interested in doing studies of distance education, and those who administer and work in distance education programs. Again, Dr. Calvert has made a thoughtful observation on this subject.

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> Distance educators, the ones who know their systems well, usually are newcomers to the field and have their roots in other disciplines; even when they do have sold research skills, they still must 'retool' for this new research area. Furthermore, the emphasis in distance education systems is on doing, not on contemplation; most people in the field are carrying a heavy workload...(quoted by Ian Mugridge's paper).

If we are to make the kind of progress with distance education that is essential for the welfare of the people of North America, dialogues must be initiated between those interested in doing research on key problems facing distance educators and distance educators actively engaged in developing and delivering distance education programs. Through these dialogues, one would expect that important research problems would be identified, research strategies would be explored and promising collaborative projects involving both researchers and practitioners would be developed.

We all hope that his panel, "Distance Education: Practitioners' Pleas for Research," will be a first step towards the creation of links between researchers and practitioners that will lead to the establishment of a sound research agenda on distance education and plans for a series of well thought through studies of key problems laid out in the agenda.

# INSTRUCTIONAL TELEVISION PROGRAMS FOR GRADUATE PROFESSIONALS

Lionel V. Baldwin[1]

## Abstract

Engineering and business colleges in the United States have successfully employed instructional television (ITV) for over 20 years. Regional systems at over 40 universities today employ "candid classroom" ITV to serve distant learners. Part-time graduate students view the ITV classes at their job sites; they are highly motivated and perform at least as well, and under some circumstances better than the on-campus students in the same course. Cooperative ITV programs involving 22 major universities are now delivered via satellite nationwide by the National Technological University (NTU). This innovative program is described and several research problems are identified. NTU is exploring how to enhance ITV with personal computers (PC's). An integrated delivery system which combines videocassette recorders (VCR's) and PC's effectively in a communications network should improve the scope and effectiveness of future services for distant learners.

## BACKGROUND

Engineers, computer scientists and technical managers today recognize the need to integrate study with work throughout their careers. Lifelong learning is not an option, but rather a necessity for these professionals. Employers, both industrial and government, are expanding the opportunities which are provided at the job site for advanced technical and management education. This market pull has challenged U.S. educators to employ the latest telecommunications technologies to extend educational services to part-time graduate students at their job sites. In a recent study of education in corporate America, Nell Eurich (1985) observed that "engineers seem to be light years ahead of other professions in using media for education and updating."

Another factor which encourages cooperation among engineering colleges is the severe shortage of experienced teachers in critically important technologies. The engineering faculty shortage reached crisis proportions recently (ASEE, 1984) because many teachers have left academe for better paying industrial jobs, new Ph.D.'s are in very short supply, and undergraduate enrollments have grown enormously to strain the existing engineering professorate.

## ENGINEERING ITV SERVES WORKING ENGINEERS

American universities are ideally suited to deliver engineering advanced education. The neutrality of these institutions has allowed them to gain electronic entrance to many corporations and to precipitate an information flow that otherwise might not exist among competitors. Engineering faculty at several colleges started in 1963 to evolve a simple but effective way to teach adult students at a distance via television. "Candid classroom" remains a mainstay of instructional television today. The following summary follows Baldwin and Down (1981).

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ITV instruction originates in regularly scheduled, on-campus courses that are attended by full-time students. The classes are held in specially equipped studio classrooms so that not only the lectures but also the student questions and discussions are transmitted to off-campus students at their job sites.

The performance of ITV adult students is usually equal to that of on-campus students who are taught the identical class when comparable admission criteria are applied. Acceptance by both faculty and students has caused the number of regional ITV system in engineering to grow from 4 in 1967 to over 40 systems operating today. Two dozen major universities have, over the past two decades, awarded over 3,500 M.S. degrees to engineers who completed all degree requirements as part-time, ITV students.

Some hallmarks of good practice in ITV have emerged over the past two decades.

- Small groups of engineers meeting on a regular schedule is desirable, particularly if one assumes the role of discussion leader. The active involvement of each participant in brief discussions, perhaps at 10-20 minute intervals throughout a 50-minute lecture, is strongly encouraged.
- On-site subject matter tutors are also beneficial although they may meet only occasionally with the group.
- Individual commitment to outside study and completion of problem assignments is important where mastery is the goal.
- Interaction with the instructor need not be face-to-face, but telephoned questions should be answered in one of the next few class sessions while the issue is under active discussion on campus. Early tests using electronic mail and computer conferencing for interaction are encouraging because these technologies offer the same flexibility and convenience advantages as ITV itself.
- A supportive administrative and physical environment also provided by the employer are appreciated--textbooks arrive on time, equipment is maintained, and conference rooms are set aside as needed.

Recent statistical study of the Stanford Engineering ITV System provides emphasis to the role which local tutors and organized discussion can have on performance. Judith Lemon (1985) reviewed the academic performance of students taking courses via television through the Stanford instructional television network over a 3-year period which included graded students in 289 non-seminar courses over 13 quarters from Winter 1978-79 through Summer 1981-82. When one statistically contrasts the Stanford full-time students in Tutored Videotaped Instruction/Honors Cooperative Program (TVI/HCP) and the live broadcast HCP student, one finds that TVI/HCP (3.47, N=308) students significantly outperform live-broadcast HCP students (3.39, N=1771), with the Stanford full-time student (3.40, N=16,652) falling between the two, not significantly different from the TVI or the live broadcast student. These unpublished results generally support the early TVI studies of Gibbons, et al (1977).

Research in instructional methods to date has not played an important role in the design or operation of regional ITV systems in engineering. Nevertheless, the practices summarized above are in general accord with such studies as shown next.

## WHAT EARLY RESEARCH SAYS ABOUT ITV

Wilber Schramm of Stanford University in 1972 provided excellent advice:

> At least two straightforward guidelines stand out from the research papers we have reviewed. Effective television can be

> kept as simple as possible, except where some complexity is clearly required for one task or another; students will learn more if they are kept actively participating in the teaching-learning process. Simple television: active students.

More recently, Charles E. Hutchinson (1982) reported on an intensive study of ITV as it is employed by engineering colleges. This NSF sponsored study was based on a simple premise: Most, if not all, ITV operations could upgrade both facilities and training of instructors and camera operators with modest investments of time and money.

The final report includes an extensive literature review concerning the important factors that influence learning from television. These factors were reported under the headings audience, behavioral objectives, identification of content needed, instructional strategy, production of programs, formative evaluation. Hutchinson concluded that the premise was correct and his task force published several practical aids.

The appropriate roles for educational technology including ITV and computers was recently reviewed as a part of an intensive study of the quality of engineering education today (ASEE, 1986). This report provides a timely overview of the tremendous changes which are affecting both the education of engineers and the practice of engineering.

## THE NATIONAL TECHNOLOGICAL UNIVERSITY

The National Technological University was established in Colorado as a separate non-profit private educational corporation on January, 1984. NTU was created to award masters degrees in selected fields. The academic programs feature approved courses of instruction offered by its 22 universities, which are also shown in Table 1.

Each participating university evaluates and records grades for students completing its courses. The student records are transferred by the participating university to the NTU Registrar at the end of each term. By using advanced educational and telecommunications technology to deliver instructional programs to graduate technical professionals at their employment locations, students do not need to leave the workplace to participate in the instructional programs.

Each NTU site is operated by a sponsoring organization (i.e., the company employing the student) following guidelines provided by NTU. The courses are rigorous, but provide a convenient and flexible alternative to campus study. NTU has the services of over 3,000 full time engineering and computer science faculty members from participating universities, which assures high quality instructional programs. Moreover, NTU conducts research in areas of educational technology related to teaching and learning to insure continued responsiveness to the needs of the students (Baldwin, 1984).

NTU's functions are to:

- Award master's degrees to qualified individuals in selected disciplines;
- Provide research seminars in each discipline;
- Operate a modern telecommunications delivery system for convenient, flexible, on-site service;
- Offer AMCEE non-credit short courses, seminars and workshops to introduce newly advanced technology concepts to a broad range of technical professionals; and
- Establish a sophisticated satellite network infrastructure between industry and the university communities

NTU began offering courses by videotape to more than 150 technical professionals in the Fall of 1984. On August 28, 1985, NTU began broadcasting two channels of full motion, color ITV via transponder 5H on GSTAR-I, a new Ku-band satellite. NTU is at the forefront of satellite transmission technology with its dual channel per transponder service. Satellite delivery boosted participation dramatically.

The NTU network is configured so that eventually each instructor can simultanteously teach both on- and off-campus students. Specially equipped ITV classrooms, each with several remotely controlled color cameras and audio microphones, are the origination point of each broadcast. The ITV signal can be beamed instantly from that campus to the satellite. The part-time students at their job sites can, therefore, view the class live and, through telephone linkages, can ask questions during the class session.

Student-teacher interaction in a teleconferencing mode via satellite have been successful. Since the NTU classes are planned to serve an average of about 55 off-campus students, classroom interaction between the teacher and off-campus students can be easily accommodated. For classes that are delayed a few hours before being broadcast because of schedule conflicts, NTU provides occasional time for recitation sessions done by teleconferencing. Videotape machines offer the student who must miss a session the opportunity to view it at a later, convenient time. Indeed, videotape is an essential part of all live ITV today, because it adds a time buffer when needed as well as an opportunity for review.

Each receiving site pays an access fee to join the NTU/AMCEE network. Some corporations choose to pay a corporate wide fee which allows all their U.S. locations to participate. The following corporations have paid a subscription fee that allows each of their domestic sites to participate in the network: AT&T, Digital Equipment Corp., E. I. duPont de Nemours, Eastman Kodak Co., General Electric Co., General Instrument, GTE Spacenet Corp., Hewlett-Packard Co., Honeywell, Intel, IBM Corp., Motorola, NCR Corp., Southern New Jersey Technology Consortium, Tektronix, Inc. These corporate-wide sponsors accounted for 56 of the fall, 1986, receiving sites. The other 24 sites are from 9 corporations or government laboratories and each has paid an individual site subscription fee to gain access.

## NTU PROJECT TO ENHANCE ITV

NTU took "candid-classroom" nationwide via satellite in 1985 and found new opportunities as well as problems. By pooling the best teachers with ITV experience, a university consortium (NTU) can markedly improve the intellectual quality of instruction over that which a single school can offer. The national range, however, also raises expectations that the "production quality" will also improve. Furthermore, the courier employed by all regional ITV systems which usually serves a 50-100 mile area, becomes uneconomical or too slow.

We believe that the time is right to introduce computer technology into the satellite ITV and telecommunications system in order to enhance instructional effectiveness by integrating television and computer technologies into an overall system for distance learners. NTU is now developing and testing an integrated system consisting of information preparation, transmission and storage facilities plus state-of-the-art conferencing. The system will facilitate the transmission of text, graphics, charts, and drawings to the remote student via satellite. Convenient and affordable storage and reproduction of the text and graphical material are inherent in the proposed design.

Specifically, the project has identified several promising avenues to provide: timely delivery of text material to distance learners; convenient and efficient delivery of graphics material to remote students;) interaction between remote students and instructors, and among students learning at various sites; rapid flow of assignments (to and from) students and faculty.

The goal is to provide the faculty an integrated solution to the problem of easily preparing and transmitting information to remote students. Delivery of this material via satellite to multiple receiving locations will truly have the effect of bringing the remote learner to the classroom. Naturally, campus students will also benefit from the improved instructional supporting materials.

## CONCLUDING COMMENTS

The NTU program may soon be adapted to the needs of technical professionals in Europe and Japan. In the near future research studies might, therefore, extend to other continents. This will surely provide creative variations, fresh vigor and additional practice groups seeking and receptive to guidance.

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**Table 1: MEMBER UNIVERSITIES OF AMCEE**
(Participants in NTU are shown by asterisk)

* **Arizona State University**
Auburn University
* **Boston University**
* **Colorado State University**
GMI Engineering & Management Institute
* **Georgia Institute of Technology**
* **Illinois Institute of Technology**
* **Iowa State University**
Massachusetts Institute of Technology
* **Michigan Technological University**
* **North Carolina State University**
* **Northeastern University**
* **Oklahoma State University**
Polytechnic Institute of New York
* **Purdue University**
* **Southern Methodist University**
Stanford University
* **University of Alaska**
* **University of Arizona**
* **University of Florida**
* **University of Idaho**
University of Illinois at Urbana-Champaign
* **University of Kentucky**
* **University of Maryland**
* **University of Massachusetts**
University of Michigan
* **University of Minnesota**
* **University of Missouri-Rolla**
University of Notre Dame
* **University of South Carolina**
University of Southern California
University of Washington
University of Wisconsin-Madison

# NORTHERN ONTARIO DISTANCE EDUCATION ACCESS NETWORK

Marian Croft[1]

## Abstract

During the next four years Northern Ontario will become a unique laboratory for distance education in all of its facets, both as a field of study and practice. Resulting from extensive funding by the Provincial Government of Ontario, an Access Network and collaborative programmes will be developed and maintained to serve a scattered population with no tradition of university participation.

## THE PROJECT

On October 30, 1986, the Provincial Government of Ontario confirmed a promise made in the April speech of the throne by announcing the creation of the Northern Ontario Distance Education Access Network. Funding for the project totals twenty million dollars, five million per year for four years, to be divided each year into three million for the development of collaborative distance education programs.

According to the government, the objectives of the project include improving access to formal educational opportunities to meet the needs of residents of remote communities using new technologies in delivering distance education and to create expertise in the design and operation of technologically enhanced distance education programmes.

The Access Network will be run out of two regional co-ordinating centres, one in Thunder Bay and one in Sudbury, each to be managed by the local university and community college. While the actual physical composition of the network has yet to be confirmed, at this stage it appears that there will be up to twenty access communities in each of the Northeast and Northwest, with each community housing an information centre, audio teleconferencing facilities, VCR equipment, IBM and possibly ICON (a provincial government-sponsored computer used in secondary schools) computers equipped for networking and communications and facsimile equipment.

## DISTANCE EDUCATION AT LAURENTIAN

Laurentian University was created in 1961 to serve the needs of Northeastern Ontario, a geographic area twice the size of France, with a population of 600,000. The university is the major partner in a system of on-campus federated church-based colleges and affiliated university colleges in Sault Ste. Marie, 300 kilometres west of Sudbury, Hearst, over 600 kilometres north and North Bay, 120 kilometres east.

Envision, Laurentian's Distance Education programme, began in 1972 as an innovative attempt to bring university courses to a scattered population with no tradition of university participation. Laurentian has over 60 courses available via print-based correspondence, audio-cassette, television, video-cassettes in learning centres in 25 communities and teleconferencing. Degrees are available in English in Psychology, Law and

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Justice, and Religious Studies. Additional degrees in Sociology and Native Studies will be completed shortly. A major project to offer the Post-RN BscN degree to nurses in remote communities will be launched in January 1987, with 300 students. In French, a total of ten courses are offered in various subject areas, with a major expansion effort underway.

Northeastern Ontario has special educational needs which can be addressed via distance education. The area incorporates many small, isolated communities which are single-industry towns, based on the primary resource industries of mining and forestry. Participation rates in university programmes, although increased significantly with the presence of Laurentian, are still lower than provincial norms. As well, levels of high school completion are lower than in the South.

Continuing professional education is essential for individuals in business, teaching, social work and nursing. Laurentian was a founding member of the Northeastern Ontario Telehealth Network, (NOTN) which links over 30 area hospitals by audio-teleconference. The university has added several additional sites. Bridging is done through Darome equipment at NOTN.

The university is committed to a multi-media form of distance education delivery which is learner, not technology centred. Courses are developed from the point of view of the student and every effort is made to ensure maximum flexibility in the application of the technology. This is especially important in the North and has given rise to the development of courses which are based on several technologies: print for the theoretical, video cassettes for enhancement and teleconferencing for class discussions.

## THE CHALLENGE

During the next four years Northern Ontario will become a unique laboratory for distance education in all of its facets, both as a field of study and practice. (Thompson, 1986) The project will include on its staff a research officer, whose first responsibility will be to develop a programme for an invitational conference on research in distance education in May 1987. All research proposals dealing with the project will be vetted by the research officer to ensure consistency and avoid overlap. The research officer may also choose to initiate research on specific areas of the project.

In his recent paper "A Discipline of Distance Education" Holmberg (1986) discusses the following components for a structural base: philosophy and theory; students, their milieu, conditions, and study motivation; subject matter presentation; communication and interaction between students and their supporting organization (tutors, counsellors, administrators, other students); administration and organization; economic systems (comparative distance education, typologies, evaluation); history. It is probable that research for the Northern Project will be developed using this framework.

In the area of philosophy and theory, it is unlikely that a great deal of attention will be focussed. Neither of the two participating universities has a faculty of adult educaion, so the theoretical base of the project will be work already done by Moore (1977b, 1986), Keegan (1986) and others.

Much work will be done on the student population served by the project. The first research study beginning in January, 1987 will deal with the demographics (similar to that done by Knapper and Waslycia-Coe, in 1982) and attitudes and values of nurses embarking on a professional degree programme.

Educational psychology, adult learning theory and instructional systems design theory will all provide useful models for assessing the project. (Coldeway, 1982; Cross, 1981; Knox, 1978) There is a great need for comparative analysis of distance education versus traditional study.

As the project will have an instructional designer on staff, research in this area should be facilitated. However, much work remains to be done on the impact of choice of technologies and learning styles on instructional design (Kaye, 1981; Fales and Burge, 1984). As the project is anticipated to include all currently used technologies, this work should be possible. It may also be possible to utilize various formative evaluation procedures during product development, including expert review, developmental testing, a three-stage model and learner verification and revision, (Weston, 1986), although the short timelines of the project may create some difficulties. Since all programme development must be done on a collaborative basis, new research possibilities exist here.

Support services for distance students continue to be difficult to provide especially in isolated and remote communities. In this project there is special concern for the provision of counselling and library services (Howard, 1985) to name only two areas. Innovative proposals which take into consideration the special needs of the North will be sought.

The project offers interesting possibilities in the areas of administration and organization because of the collaborative management structure which will be put in place. In each major centre only one of the two institutional partners has distance education expertise. The coordinating centres themselves will provide an unusual case study in the development of communications networks.

The Northern Project will be funded in its entirety by the government of the province of Ontario. Both the network and programmes developed for it will be carefully costed and audited, allowing for comparative cost analysis with in-person courses and programmes, utilizing models similar to those devised by Rumble (1981) and Snowden and Daniel (1979).

Evaluation will be a major research area for the project, including evaluation of comparable technologies and their effectiveness and the educational implications of information technology. Course and programme evaluation as well as evaluation of the network itself will also be done.

## CONCLUSION

One of the underlying principles of the Northern Project has been stated as follows:

"...Because we believe knowledge gained must be shared and advanced, we are firmly committed to a strong and integrated research component to the project. Northern Ontario will become, for these four years, a unique laboratory for distance learning. It is our responsibility as educators to ensure that this laboratory is used to the best advantage." (Croft and Derks, 1986).

It is also our greatest challenge.

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# DEVELOPMENT OF DISTANCE EDUCATION IN THE UNITED STATES

Daniel Granger[1]

## Abstract

Distance education is necessarily student-centered, at least geographically. As American higher education seeks to become more responsive to students' needs in terms of quality and connectedness with the rest of their lives, research into distance education can assist that process by providing student-centered models for instruction and the uses of technology.

## INTRODUCTION

The growth of distance education internationally has, in the last 15 or so years, paralleled the growth of nontraditional or innovative education in the United States in its various forms, including individualized education and all the development related to adult education and lifelong learning. Distance education was primarily concerned with providing access to education for those without traditional programs at hand, while innovative U.S. educators have sought to develop programs which would truly meet the needs of a student population which less and less resembled the traditional 18-22 year-old undergraduate.

Throughout the 1970's and 80's, non-traditional education continued to develop and evolve in the United States while distance education, following the impressive model established in Britain, was taken up by nation after nation. Some, like Canada, have a long history of serving geographically remote students; others, in Africa or Asia, for instance, see in distance education an efficient tool to foster national development on a large scale. What the British Open University realized early on, and what every successful distance learning program comes to realize, is that providing basic access to an educational program for students in no way assures successful engagement with education.

This, of course, is the same realization that more traditional education has come to, captured in the title of one national report, Involvement in Learning. What has become clearer is that the concerns for quality in higher education are much the same, regardless of the mode. Further, because of the parallel but quite separate developments in distance education and innovative education in the U.S., reciprocal close study and research can produce real mutual benefits. As a practitioner of distance education in the United States, I would like to see from researchers in this country cogent evidence not only about the effectiveness and efficiency of distance education, but about how it can be adapted and utilized within the U.S. The opportunity here is to provide an educational mode which can satisfy the rising national demand for education of high quality that is also impressively cost-effective.

## STUDENTS

### Student Autonomy

In the most recent Carnegie report, College: The Undergraduate Experience, Ernest Boyer voices a serious concern about the disjunction between academic experience and the rest of students' lives -- in terms of goals, values, and relevant connections. Distance education is also concerned about the need to establish a strong and vital connection between students' academic activities and the rest of their lives.

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At the same time, there is in the literature of distance education a major concern about student autonomy: the student's right to determine as many factors as possible about his/her learning experience, including the duration and content direction of the study. At one end of the spectrum, Holmberg (1986), a major researcher in distance education, declares flatly: "It is in my view up to the student himself or herself to decide what is good for him or her." The other is described by Moore (1985) when he notes that "The typical distance education package is so highly structured that it gives the student little autonomy. The students may choose from a range of courses, but then must follow a precise sequence of course materials, may omit very little and bring in very little of their own experiences."

Positions about student autonomy vary greatly from nation to nation, culture to culture. At Empire State College, our experience has been that the more directive support (the less autonomy) students are given, the higher their success rate and satisfaction. Factors such as strict term dates, assignment deadlines, and explicit performance expectations seem to provide a reassuring structure for students at a distance. Yet we also recognize the value of enabling students to make experiential connections. Since this is a major issue in distance education, studies focusing on the cultural variables as well as the impact of various control factors on long-term student success would be quite useful in elucidating this debate. The outcome, we hope, will be guidelines for a firm supportive course structure which encourages students actively to engage appropriate personal experience with the content under study.

## Integration of Student Experience

In addressing the need to establish a strong and vital connection between students' academic activities and the rest of their lives, U.S. educators have made significant advances in the recognition of individual experience as an important aspect of learning. This contextual connection has already been developed to a certain extent in many adult education programs, in which students are expected to prepare a portfolio of the learning they have gained through prior experience to be evaluated and assessed for its college-level learning. This portfolio then serves as one distinct component of a student's program. At the Center for Distance Learning we have begun to recognize that experiential learning can be a more refined tool to determine and shape further study, making the kind of engaged connections for students now called for in both distance and mainstream education. One obvious example is the Business area: a manager who has helped his firm grow from a five-person to a fifty-person operation will be capable of specialized advanced study in organizational behavior and management policy. Less obvious is the student whose life experiences can provide important connections with various academic areas: the student who has experienced several life-and-death situations in his service as a police officer has a special perspective on many philosophical, ethical, and social issues which could enrich not only his own study of the related academic subjects,but almost certainly that of his fellow learners -- both faculty and students.

This is also a potentially rich approach to bridging the perceived gap between liberal and professional studies. The humanities and other liberal arts historically have been our way of understanding and explaining our own lives and behavior. By rooting liberal studies within the context of students' own lives, students themselves can vitally engage philosophical, ethical, historical and social issues in critical and affective ways which lead to significant learning experiences. Even within a professional program, these kinds of studies lead students to raise questions and apply perspectives which can make them more responsive to a wider range of concerns and, consequently, more effective within their own career fields.

The experience at Empire State's Center for Distance Learning is that these contextual connections can be used in a variety of ways to strengthen and enhance learning experiences, but the practice is still haphazard at best: students seem to engage effectively for a variety of reasons with a variety of subjects. Careful studies need to be conducted to determine how best to understand students' contexts and then how best to make the various learning connections. Success here will produce programs which are, in the very best sense, student centered.

We have just begun to use an individual student's full context to good educational purpose and we need to study how best to do that. The connection of learning to some aspect of a student's life should not simply be an opportunity for a fascinating war story but a way of rooting that learning more deeply in the student's affective, as well as cognitive, consciousness.

## INSTRUCTION

### Faculty

Virtually all distance education programs use a large number of part-time faculty to tutor or supervise their courses. At the Center for Distance Learning, we draw these part-time faculty both from traditional colleges and from the professions. We have found a number of differences which may raise interesting research questions.

1. Traditional teaching faculty usually take longer to adjust to the needs and expectations of tutoring courses at a distance than tutors recruited from professional practice. Traditional faculty may be uncomfortable with the facilitative nature of tutoring versus the more controlling position of classroom lecturer.

2. Course tutors who also work as professionals are more open to applications of theory to students' personal experience and will encourage valid applications of experience to assignment work.

3. While both traditional classroom faculty and practicing professionals seem to enjoy distance course tutoring, professionals seem to seek out these positions as opportunities to share their knowledge of fields they know and love well. (Certainly the compensation is not a major incentive.)

From this experience, it seems that if distance education is to become a viable mode in the United States, some of the issues needing further study are the roles and responsibilities of faculty in relation to instruction, i.e., the materials and their delivery; the responsibilities of faculty to students as knowledge experts, fellow learners, counsellors/advisors, and facilitators. Not surprisingly, these are the same issues of concern to educators like Boyer, Astin, and William Bennett. What may be called for is a shift or perhaps evolution in the conception of the professional as faculty. What seems to be emerging is a professional-technical class housed in universities and corporations functioning as practicing professionals and at the same time sharing their knowledge with succeeding generations through a variety of sophisticated learning technologies.

### Technology and Education

The current excitement about the application of new technologies to education may well offer the best catalyst for both academic and administrative change because of the apparent wealth of possibilities. Here, too, the experience of distance education, not only with new technologies but with the pedagogies and support systems which must accompany them, can be a rich resource.

We know that the history of education is strewn with the promises of technology, yet we still use book and pencil. If the new technologies are to be major improvements in education, with which students, and within what kinds of organizations and support systems? An expensive video shown by a professor in his classroom may enhance learning there; beamed into a remote region to be seen by hundreds of isolated distance learners, it becomes central to the learning process.

The Center for Distance Learning was established by Empire State College with the expectation that it would use new technologies to serve distant learners efficiently and cost-effectively. But to date we have been able to use effectively only a limited range of what is available. Consequently, research might be undertaken not only into possible applications of the new technologies, but into the practical effectiveness of certain technologies in various configurations of students, content, and circumstances. Not only large-scale questions about the educational use of various information transmission technologies should be studied, but immediate questions about, for instance, the cost/benefits of various support models for televised instruction, the potential of computers as barriers as well as facilitators to learning, or the cost/benefits of sophisticated computer-aided instruction compared to much simpler forms of computer-mediated instruction.

## CONCLUSION

Distance education as it is practiced internationally has been incorporated into various configurations with both new and existing institutions to provide education to larger and more diverse populations. Distance education in China alone serves over a million students. In the United States we have tended to be complacent in the richness of our educational resources, but two of the most recent national reports, Boyer's College: The Undergraduate Experience and Terrel Bell's To Secure the Blessings of Liberty, forcefully remind us that all is not well in education here. The task for educational researchers is an important one, and distance education offers a number of formulations and models which may assist their work.

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# DISTANCE EDUCATION: PRACTITIONERS' PLEAS FOR RESEARCH

Ian Mugridge [1]

## Abstract

This paper discusses the question of the existence or emergence of a discipline of distance education and raises a set of questions related to research in and the practice of distance education. Some of these questions are then addressed within the Canadian and, more specifically, the British Columbian context in which the author's institution, the Open Learning Institute, exists. The state of and the need for research in distance education in B. C. is also discussed.

One of the signs of growing maturity in an area of academic activity and enquiry is frequently of a discussion about whether that area constitutes a discrete discipline. A later sign of more maturity is -- somewhat less frequently -- the conclusion that such an area of activity and enquiry does not constitute a discrete discipline and can indeed best be understood as part of a wider discipline or collection of disciplines. Distance education has reached the first of these stages. It is not yet clear whether it will or -- I am obliged to admit in spite of my prejudices to the contrary -- whether it should ever reach the latter.

Over the last few years, the writings of people like Borje Holmberg in Germany, of Desmond Keegan in Australia and others have led us, rather self-consciously, it sometimes seems to a consideration of the claims of distance education to be regarded as a discipline in its own right. The former has produced a flood of writings on the state of research in distance education and of trends in its practice. Such writings have been designed to demonstrate the existence of a discipline of distance education, one which, as he recently claimed, "is not only ... now de facto established as both a research area and as an academic teaching subject, but is also a field of study intent on future developments." These developments are sufficient to put distance educators "in a position to allow ourselves the claim that distance education, however humble the achievements so far may be, is progressing as an academic discipline." (Holmberg, 1986)

Leaving aside the question of whether establishment as a research area and as an academic teaching subject entitles such an area to be called a discipline (as editor of The International History Review, I would not presume to claim that such a well-established research and teaching subject should be regarded as a separate discipline), it seems to me that this question, now being pursued so assiduously by many of our colleagues, is one which may frequently generate more heat than light and can thus safely be left aside from consideration, at least for the time being and until the subject can be treated with more hope of a resolution -- in other words, perhaps, until the resolution is so clear that discussion is no longer necessary.

Much more useful questions are, it seems to me, being raised in the attempt to deal with the practical problems of distance educators such as those who are participating in this symposium. Many of these questions come from our own experience and needs; but many others come from the general experience of distance educators in North America and elsewhere. Let me try to deal with the second group of questions first.

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In an article which appeared in Distance Education in 1983, John Sparkes of the British Open University discussed the problem of creating a discipline of distance education. In concluding that the creation of such a discipline was not merely possible but also desirable, he listed several areas of concern for distance educators. These were -- and they deserve quoting at length --

> 1. A new taxonomy or categorisation of educational aims and of types of courses, bearing in mind the wide range of courses required by part-time, home-based students. The set of types of educational aim might include the teaching of knowledge, of understanding, or intellectual skills, of manual skills, and of attitudes etc. (cf Bloom). The set of types of courses might include awareness courses, training courses, updating courses, academic courses, upgrading courses, etc. These different types of course contain different mixes of the various kinds of educational aims, and must therefore be designed differently.
>
> 2. An explication, based not only upon psychological research but also upon distance teaching experience, of the various ways in which people learn, and can be taught. It has long been clear that, say, knowledge, deep understanding and skills require different learning and teaching strategies. It is also well known that, within these strategies, individuals (e.g. convergers and divergers, visualisers and verbalisers) have their own preferred styles of learning. The use of distance teaching methods that are less adaptable than face-to-face ones, and the expanding demands of adult education, are throwing new light on these general problems.
>
> 3. An explication of the pedagogic capabilities and limitations of different distance teaching methods. These relate not just to the types of educational aims and types of course being offered, but also the subject matter, to their cost in cash and manpower, to their accessibility to students, both physically and psychologically, and to their goals.
>
> 4. An extension of feedback theory, as developed in engineering subjects, to the educational field. Properly used, bearing in mind time delays, etc., the theory can be used to design optimum strategies for the reduction of misunderstanding in students, caused, for example, by errors in course materials, failure to match a course to its target student audience, variations in student ability etc.
>
> 5. Applications of information theory and a better understanding of human information processing in the brain, by means of which it will be possible to distinguish between teaching material that is readily acceptable and that which is difficult to read or hear or see or grasp. (Sparkes, 1983)

Having listed these examples of areas in which distance educators should encourage research, Sparkes went on to discuss other problems in ways which make important statements about our work. Most of us would agree that much of the practice of teaching has hitherto rested at best on a limited theoretical understanding of the processes involved, being based largely on a short apprenticeship followed by an intuitive building on this and the teacher's own experience to achieve success. Even though the experience of successful face-to-face teaching may be helpful to a distance teacher, such a teacher requires much more than that to deal with problems resulting from delay, distance, initial investment in prepared materials, lack of immediacy and so on. One of the things which becomes important here is the ability, based presumably on academic and tested theories, not merely to explain known phenomena, but to predict new ones, to take action, in fact, to bring about desirable future events. (Sparkes, 1983) It is this central problem which, more than any other educator, the distance educator, frequently removed from his students in a way that educators in conventional institutions are not, must address if he is to answer more effectively the needs of the growing number of students he is called upon to serve.

At this point, I would like to shift attention to the particular perspective from which I view my work as a distance educator and thus to the context within which I do that work. Some discussion of that context is therefore appropriate. The institution to which I belong is the Open Learning Institute of British Columbia, which is Canada's westernmost province, covering an area of almost 350,000 square miles and with a widely and thinly scattered (except for two concentrations totalling about sixty-five percent of the whole) population of something over 2.2 million. OLI was created in 1978 to offer programmes in three areas, first degrees in arts and science, technical and vocational subjects and adult basic education, to the entire province by distance means. From its pilot semester in September, 1979 when seven courses were offered to 750 students, the institute has grown to the point where, in the 1986/87 academic year, over two hundred courses will be offered to about 19,000 students.

OLI has a number of interesting features, one of which is that, so far as we know, it is unique in the breadth of its mandate. Another is that it will soon cease to exist. In the summer of 1985, the provincial government requested the boards of the Open Learning Institute and of the Knowledge Network, the provincial educational television network, to begin planning for the establishment of an open learning authority. The government made this task easier by an ingenious device known as "the boards of common membership" -- the same ten people sitting as two legally separate boards. This process continued until the spring of 1986 when recommendations were reviewed and accepted by the provincial government and legislation drawn up. The unexpected resignation of the provincial premier and subsequent leadership convention and general election caught this legislation part way through the legislature. It is expected, however, that it will be re-introduced when the legislature returns in the spring of 1987.

In the meantime, planning for the new authority and integration of the two principal agencies has continued so that much of the new structure will soon be in place. The authority will be charged with the coordination of open learning throughout the province and will have at least four quasi-independent components, an open university, an open college, the Knowledge Network and an administrative branch. It is expected that the first three will work separately and together to improve open learning offerings in the province. More important, however, it is also expected that the components will work with the other parts of the provincial system -- schools, community colleges of which there are fifteen, institutes of which there are four in addition to OLI, and public universities of which there are three -- to enhance open learning opportunities in a coordinated and rationalized manner.

Having now introduced a new element into the discussion -- that of open learning -- I should perhaps pause to try to explain our use of that term. Two things should in my view, be made clear: firstly, that open learning is not a process but an idea and, secondly, that distance education and open learning are not the same thing. Distance education may be a part of open learning. It is certainly one of the possibilities which will be considered in the provision of open learning opportunities, the aim of which will be to make available as widely as possible a series of flexible responses to student needs, using available methods and technologies as appropriate.

This is necessarily a vague description but my hope is that it will make clear that most of the issues raised in the article I quoted earlier apply to open learning as well as to distance education. To use the issue which I described as central, it is, if anything, more necessary to know on what basis and through what means, it is possible to bring about desired future events in student learning. Thus, it is, I believe, possible to carry on the discussion of the need for research in these two distinct areas as if they were interchangeable.

The problem facing researchers in distance education was described very graphically by one of my colleagues in a recent article. "The opinions of both supporters and detractors about many aspects of distance education are based largely on intuition, unsupported assumptions and casual observations." (Calvert, 1986) According to Dr. Calvert, the problem is not that problems worthy of investigation have not been identified but that other factors -- shortage of funds, of publication outlets, of time to undertake research -- have kept genuine research, at least in Canada, to a minimum.

Some of these deficiencies can be and are being remedied. Funding agencies are beginning to view more favourably requests for research grants in areas related to distance education, both as projects in themselves and as parts of larger training or pilot projects. Publishers are beginning to realise the growing importance of distance education as a field worthy of investigation and two new journals are being added to the available outlets -- the Journal of Distance Education published under the auspices of the Canadian Association for Distance Education for the first time in November, 1986 and the American Journal of Distance Education soon to appear from Pennsylvania State University. There is a sense in which the third factor noted above is the most important. Once again, one of Dr. Calvert's observations is apposite:

> Distance educators, the ones who know their systems well, usually are newcomers to the field and have their roots in other disciplines; even when they do have solid research skills, they still must 'retool' for this new research area. Furthermore, the emphasis in distance education systems is on doing, not contemplation; most people in the field are administrators carrying a heavy workload. When special research units are established, they generally serve administration and focus on practical day-to-day issues. (Calvert, 1984)

This is not a plea for more sabbaticals for harassed administrators; but it is a plea for a more systematic attempt to address issues of major importance which will affect future developments in distance education. As a parenthetical comment, let me say that one of the encouraging signs in the jurisdiction where I work has been the willingness of the authorities to make a serious commitment to open learning research on a system-wide basis so that, for example, the emergent Open Learning Authority is involved in discussions with the University of British Columbia and other components in the system to build theoretical and applied research and teaching programmes in open learning.

In a Canadian context and more particularly, in British Columbia, a good deal of literature now exists which documents the experience of distance educators and their students. The B. C. experience, for example, has produced several pieces on the work of the Open Learning Institute and the Knowledge Network (see, for example, Bottomley, 1986; Catchpole and MacGregor, 1984; Crawford, 1980; Ellis and Mugridge, 1953; Forsythe, 1982; Meakin, 1982; Mugridge, 1986; Scales, 1984; Timmers and Mugridge, 1986). But this growing body of work by no means represents a systematic attempt to investigate the problems of distance education; and it makes little, if any, progress towards answering the major theoretical and practical questions posed in the Sparkes article quoted above. The kind of largely descriptive work which has been done to this point has value in making available widely the experience of distance education in B. C. but it is certainly not a sufficient basis on which to design a system for the future.

A couple of examples on severely practical questions will be sufficient to illustrate this. One of the purposes of the emergent Open Learning Authority in B. C. is the fostering of a system-wide approach to open learning, the establishment, in other words, of a series of inter-institutional arrangements which will, it is hoped, enable our students to be better served. At the beginning of a major effort in this area, however, we know almost nothing about the ways in which inter-institutional relationships develop and succeed or fail. In 1979, the question was discussed at length at the British Open University's tenth anniversary conference which came to the obvious but not very helpful conclusion that consortia are a good idea but fail more often than they succeed. (Neil, 1981) In Canada itself, as recently as 1982, Crawford and Crawford surveyed the field and concluded that most efforts in Canadian distance education have been undertaken by single institutions without reference to others. Further, there is little documentation of the work which has been done and what exists is almost entirely descriptive. (Hart, 1981; Mugridge, 1983; Yerbury, 1985)

A second area of investigation shows even more graphically the need for this. In a situation in which B. C., in common with other Canadian provinces and indeed with most jurisdictions, has imposed severe financial restraints on its educational institutions, there exists one article on the economics of distance education. (Snowden and Daniel, 1980)

Further investigation of these questions is unlikely to help us deal with the larger issues already enumerated. The paucity of work done on these matters, however, points up graphically the need for an increased attempt to investigate systematically and thoroughly a large number of issues related to distance education. In an educational environment which is moving -- not always forward -- and changing -- not always for the better -- as rapidly as that of distance education, the price of ill-informed action may well be high and almost certainly higher than an attempt to undertake rigorous and systematic research.

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# GRADUATE EDUCATION DESIRES, DETRACTORS, AND DETERMINANTS FOR NAVY AVIATION OFFICERS

Joseph D. Smith[1]

## Abstract

The Navy is currently faced with the challenge of providing graduate level education to Navy Aviation Officers. The traditional method of providing resident full-time instruction is not feasible. A survey was made to determine the desires, detractions and determinants of Navy Aviation Officers vis-a-vis graduate education. The results of the survey indicate that the opportunity for graduate education has a high priority among Navy Aviation Officers.

## BACKGROUND

Today's Navy Aviation Officer is interested in graduate education but has the primary duty of aviation. Relatively few of the current 16,000 aviation officers can attend graduate school full time. As a result only 17.6 percent of all Navy aviation officers currently have master's degrees. To retain aviation officers and to improve the educational skill of career oriented officers a survey was developed to determine the attitude and desires of Navy Aviation Officers.

The survey was sent to Navy Aviation Officers currently in flying assignments. The return rate was 42 percent with 2,753 surveys returned. The primary focus was on the Lieutenants (LT) and Lieutenant Commanders (LCDR) (those with 4-20 years of military service). The surveys were mailed independently to a central point. Tabulation and data summarization were performed independently.

## DESCRIPTION OF THE STUDY

To ascertain feedback on the desires, detractors, and determinants of aviation officers, a survey was distributed to aviation officers. The target population was aviators with 4-20 years of Navy service. These officers were considered to be in the prime retention group. To retain these valuable personnel assets, decisions were required following an analysis of the value aviation officers place on graduate education.

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A survey was developed for distribution to aviators. The questionnaire contained both qualitative and quantitative items. The goal of the survey was to obtain feedback for decisions concerning graduate education. Specifically the extent to which graduate education was desired, the preferred areas of graduate study, and the detractors to the obtaining of graduate courses were solicited.

The number of responses, 2,753, was extremely high for response to questionnaire mailed to a central point from Naval bases around the world. A personal letter was sent to deployed commands by a Navy Vice-Admiral. This personal letter raised the level of responses from officers by focusing on the seriousness of the effort.

## FINDINGS OF THE STUDY

The findings of the study include:

a. Navy Aviation Officers strongly desire graduate education. Ninety two percent of LT's and 85 percent of LCDR's state they do not have all the education they need or desire.

b. Seventeen percent of LT's and 44 percent of LCDR's have previously enrolled in off-duty graduate education.

c. The preferred subject areas identified for graduate study are:

1. Strategic Planning/International Relations
2. Financial Management
3. Computer Science
4. Computer System Management
5. Education and Training Management

d. The major detractors to graduate education are:

1. Flight schedule
2. Deployment schedule
3. Family commitments
4. Transfer prior to completion
5. Tuition and fees

e. Only 46 percent of surveyed officers realized the relationship between graduate education and their career subspecialty.

## IMPLICATIONS OF THE STUDY

The results of the survey indicate that graduate education is highly desired by Navy Aviation Officers. Courses of study should be developed to meet the expressed needs of officers in the specific areas of interest. Interest areas will need to be monitored frequently to detect shifts in interest. Those officers already involved in graduate study need to be encouraged to continue.

The major detractions to graduate study need to be acknowledged by program planners. To overcome the main detractors (flight schedule and deployment schedule) non-traditional delivery methods and locations need to be developed. The detractor of family commitments and transfer prior to completion must also be addressed. It is notable that tuition and fees are not perceived as a strong deterent to graduate study. The low priority may be due to the officer having access to tuition assistance and Veteran's Administration GI Bill benefits.

The finding that 46% of the officers were unaware of the relationship between graduate education and their career subspecialty is interesting. Prior to the survey it was assumed that all officers understood that graduate level education was subject to review and that educational skill requirements for subspecialities were identified. The Navy must improve internal communication in this career area.

## PROCEDURAL IMPLICATIONS

The results of the survey have been described previously. Two procedural implications emerged. The value of having a high ranking official (Vice-Admiral) personally encourage response to a written questionnaire is noteworthy. In the hierarchy of the Navy, position and personal power is extremely valued. The personal letter to commands increased attention to the seriousness of the survey effort.

The second process implication is the asking of responses to questions that are anticipated to confirm established standards and guidelines. The question soliciting response to knowledge of the relationship between officer graduate education and the subspecialty system had an anticipated high response. Results of this item rejected the prior existing assumption that the relationship was known by the greater majority of officers. Those attempting to do survey research may wish to include items of this nature. What may be obvious to those who deal with routine relationships may in fact be unknown to target populations.

# CONTACT IN TELECOURSES: THE TRADE-OFFS

Peter K. Wiesner[1]

## Abstract

This paper highlights a dissertation study in which data from a survey and interviews were analyzed to ascertain the role of contact in distance education. In the discussion, the respondents are profiled in the context of telecourses offered by U.S. colleges. The findings center on how students perceive and reconcile trade-offs, such as contact for convenience. By minimizing mediated and face-to-face contact with the instructor, the telecourse alters the nature of the teaching-learning process as found in the classroom.

## INTRODUCTION AND BACKGROUND

Television has gained a modicum of acceptability in education, in large part because of the legacy of research indicating its comparable worth to face-to-face instruction.

The Corporation for Public Broadcasting (1986) reported that in 1985 more than 10,500 telecourses were being offered by more than 900 or 32% of U.S. colleges. The total national course enrollment was nearly 400,000, with an average of 38 students per course. The majority of telecourse students were "non-traditional" students, including homemakers, elderly persons, job holders, and handicapped persons.

In telecourses, students learn primarily from media and little through interaction with people. According to a study by Wiesner (1986), students who need to earn credits without having to attend class are willing to sacrifice contact for the sake of convenience, some even preferring the anonymity of learning outside the classroom. Brey and Grigsby (1985) surveyed 8,000 students enrolled in 42 telecourses offered by colleges and universities throughout the United States. Over two-thirds of the students were female and tended to be older than traditional college students. About 80 percent took telecourses as part of an over-all program of study that included traditional classes. For 15 percent, there was at least a six-year hiatus since taking part in formal education. Almost two-thirds of the group had never taken television courses before. About 80 percent watched the television lessons at home.

Proponents as well as critics of telecourses recognized the pitfalls. Wedemeyer (1961) stressed that television should provide for two-way communication and that it should maintain the centrality of the individual and allow for pre-planned learning, not merely passive watching and listening. The limitation of totally mediated instruction was recognized by Orndorff (1976) who wrote that television,"...cannot serve as a replacement for talented teachers, but it is an effective tool for professionals to reach individuals in a group setting" (p. 11). Harrington (1977)

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cited the lack of contact as a reason for drop out and emphasized "...the vital role of discussion in the learning process" (p. 67). Schramm (1981) wondered whether television encourages a taste for information rather than knowledge. And Lentz (1982) observed that "...spoken language in face-to-face contact...is the most accurate method of testing the truth of our knowledge of the world" (p. 325).

Telecourses were to become in higher education what fast food chains became in the restaurant world--another means of providing service. Purdie (1979) of Coastline Community College wrote with promotional zeal that telecourses "...do teach, students are attracted to them, do succeed in them and do enjoy them;" and claiming that the effectiveness of television courses has probably been more intensively studied than most on-campus instructional modes, he declared, "We who design and offer television courses do not have to be defensive any longer" (p. 25).

## STATUS OF TELECOURSE RESEARCH

The existence of a "research gap," described by Wiesner (1983), was also noted by Gross (1979), Walshok (1980), Bretz (1985) and Holmberg (1977) who confirmed the lack of accessible research concerning the role of television in distance learning. Little thought has been given to the function of interaction between teachers and learners in a meaningful educational experience. How much of the social dimension of learning should media displace in formal education? Is learning to be reduced to information gathering and processing, or is socialization a fundamental part of the teaching-learning process?

Much of the research pertaining specifically to telecourses has been in response to the promotional and organizational needs of those who produce and use them. American telecourse producers have sponsored studies pertaining to enrollment, demographics, student performance, drop out, and student satisfaction. However, few have focused on the teaching-learning process based on the experiences of adult learners.

## AN EXPLORATORY STUDY ON TELECOURSE STUDENTS

The findings presented here are based on a dissertation study involving a survey of 220 respondents and in-depth interviews with 29 students enrolled in telecourses offered by eight New Jersey community colleges. Grounded theory, as described by Glaser and Strauss (1967), guided the data collection and analysis; and the findings were presented in light of recent developments in communication theory as forwarded by Ruben (1984) and others.

The interviews along with the survey data provide a composite view of the telecourse experience, as seen from the student's point of view. Most students realized that they were sacrificing contact for convenience. However, only a few acknowledged that the lack of contact and communica- tion might result in an inferior educational experience. Some students noted the lack of opportunity to test ideas with instructors and students, and expressed an awareness of the importance of continuous discourse--the interplay of reading, thinking, writing, and discussion--that a high-quality education entails. Yet, many looked upon education as an information-gathering and concept-assimilation enterprise, and did not appreciate the dialectical processes of intellectual development.

### Survey Results

Saving time and avoiding schedule conflicts were ranked the highest by survey respondents among a choice of possible reasons for taking telecourses. Although telecourse students tended to rate conventional classroom instruction higher than telecourses, many indicated a willingness to take another telecourse, as well as on-campus courses. It appears that the convenience of telecourse made up for the lack of overall desirability suggested by the comparison with regular courses.

Telecourse students said that the text was the most important learning resource in a telecourse, followed by the study guide and television programs. Contact with the instructor and on-campus seminars were rated as less helpful than the text, study guide, and television lessons. Most students indicated that they missed no more than four programs, indicating a degree of faithfulness to viewing telecasts.

There was, on the whole, little contact between students and instructors. Most students reported attending three or fewer sessions. Additional contact was generally not desired by students. A majority indicated that they would prefer to attend two sessions or less, if given the choice. Approximately one-third indicated a desire for more contact and a majority said they were satisfied with the contact provided.

Instructors were more likely to communicate by mail than by phone. Students were more likely to contact instructors by phone than instructors would contact students. Students tended to contact professors for practical reasons, such as discussing tests and assignments. Very rarely was communication used to discuss course content. On the whole, telecourse students were not interested in getting to know other students in the course or having the means to contact them. As learners, students had little contact with the outside world. If students discussed their courses at all, they did so with members of their households and with friends and acquaintances. Contact with fellow students occurred less frequently than contact with friends and acquaintances.

### Interview Findings

The most compelling observation one can make about telecourses is that they isolate learners from teachers and fellows students, representing a trade-off for adults who either cannot attend regular classes or who prefer not to. Many adults who take telecourses do so for reasons of convenience. They want to save time and fit studies into busy schedules that cannot accommodate regular attendance.

There are trade-offs when contact and communication are reduced for the sake of convenience, and the question is to what extent limited contact through mail, telephone, and occasional is sufficient to ensure a meaningful educational experience. In some courses, where factual learning was the main objective, students felt that the lack of contact with an instructor did not hamper learning; but, when interpretation and analysis were the main tasks, as they were in a telecourse on Shakespeare, the desire for interaction was obvious.

The lack of feedback as a trade-off had an intrinsic positive value for some students, including those who were not interested in receiving negative feedback from the instructor and peers. The telecourse provided much desired anonymity for adults who wanted to earn credits without exposing themselves to face-to-face criticism. Yet, by avoiding negative feedback, students also avoided the possibility of positive feedback. The lack of interpersonal relationships with the instructor and peers left students isolated and prone to role confusion and dissonance.

## OBSERVATIONS

The findings of the study do not suggest an indictment of the telecourse experience. In serving adults who might otherwise be excluded from postsecondary education, telecourses serve a valuable function. Yet, the question remains, to what extent is it really necessary to remove contact and communication from an educational process designed for working adults? To what extent and in what circumstances might contact and communication be fostered in distance learning?

Telecourses tend to foster information acquisition through viewing and reading. Since very little learning is directly from people, the social dimension of learning, sharing ideas with people though direct interaction, is largely absent in telecourses, and in that respect information acquisition becomes separated from social intercourse.

One might argue that by reducing or eliminating contact, the learning process could become increasingly autonomous, inasmuch as the learner is no longer able to depend on the instructor and his authority as an external impetus and support for learning activities. Telecourses do, after all, give self-directed learners the opportunity to pursue content areas on their own. Yet when compared to reguar courses, telecourses provide learners with less contact, hence less service and support.

Certainly, the telecourse requires the instructor to modify his usual role as presenter and arbiter of content. By reducing the role of the instructor to that of a "manager" of instruction, telecourses are largely defined by pre-recorded materials. Students, when properly oriented, understand what is expected of them and reconcile whatever negative feelings they may have by recognizing the major trade-off, convenience for isolation. To some, isolation is a big price to pay for convenience, for it means less contact and communication, and hence, less role certainty, less feedback, and less recognition. To others, isolation has its benefits in addition to convenience: more independence and greater autonomy over learning.

The study identified the issues related to contact and communication which are central to the teaching-learning process. It suggests that educators reconsider not only how telecourses are designed and offered, but also the role of contact and communication in all educational pursuits. It is doubtful that telecourses can retain the full range of educational experience by replacing all face-to-face contact with media in the teaching-learning process. There is also the question of responsibi- lity when primary instruction is presented through pre-recorded materials.

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# THE ROLE OF THE MONTGOMERY COUNTY COOPERATIVE EXTENSION SERVICE IN PROVIDING INFORMATION TO FARMERS AND OTHER USERS

Kurt Finsterbusch and William Rivera[1]

## Abstract

A survey of 118 users of MCCES containing 28 full time farmers 30 agricultural businesses, and 30 homeowners and a survey of 120 county residents with 30 in each of the same categories for information which addresses their agricultural/horticultural problems and then turn to professional sources of information. The Montgomery County Cooperative Extension Service is the most highly ranked, on average, of these professional sources of information. In contrast, rich full time farmers tend to rely less on friends and relatives but use many sources of information relying most heavily on consultants and MCCES. All four categories of MCCES users were generally very satisfied with the service.,

In this paper we report on a pilot study of the role of the Montgomery County Cooperative Extension Service (MCCES) in providing for agricultural or horticultural producers information which improves their production. The report is based on a sample survey of users of MCCES and a sample survey of four groups in the county which are likely to use MCCES. The most important group of MCCES users is the full time and part time farmers on the 667 farms in Montgomery County. The next most important is the numerous agricultural businesses, the largest number of which are landscape and lawn care businesses. This later group also includes nurseries, garden supplies, tree service, cemeteries, golf courses, pest control, fertilizer and chemical distributors, and consultants. Another major group to use MCCES is homeowners who seek guidance on garden, lawn, and household plant problems.

The Cooperative Extension Service (CES) was established in 1914 to serve "the people of the United States...in agriculture and the mechanical arts." At the time five-sixths of the population was rural and the CES focused on farmers. Now that the country is largely urban or suburban the CES has had to modify its program to serve a wider range of clients.

The CES in Montgomery County is a very busy office handling approximately 900 phone calls per month except during the winter. It has a staff of 40 including 14 professionals. Four of these are agricultural/horticultural agents and we focus on the services which they provide. Their program claims only 28% of the MCCES budget. These agents provide information to telephone and office inquirers and prepare workshops, conduct on-site visits, analyze soil samples, and write reports and newsletters. There is a very heavy demand for their services. The other major budget areas of MCCES are home economics/nutrition programs (39%) and 4-H (33%).

The data base for this pilot study is a survey of four sets of users of MCCES and a random survey of these four groups at large in the county. From the list of users of MCCES 28 full-time farmers, 30 part-time farmers, 30 agricultural businesses and 30 homeowners were randomly selected and surveyed. From county lists for each of these same four groups 30 people were randomly selected and surveyed. Although 238 people were surveyed no more than 30 were surveyed in each of the eight groups. Thus this is a pilot study providing provisional findings.

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We look first at the 30 randomly selected full time farmers to examine how they go about obtaining information which they need. First, the farmers were asked "what are some of the main problems or concerns you've had in the past year with land, crops, plants or flowers, insects, management or marketing?" The dominant problem was marketing, cited by half the respondents. Next came pest and weed control and third was taxes. Several also indicated a desire for information on no-till farming which MCCES was emphasizing around this time.

The general pattern for information seeking for these farmers was to use friends and relatives first and then use professional sources of information including extension, salespeople, and trade associations.

The questionnaire asked three questions which are germaine to this issue:

1) "What sources of information do you use when you have a problem or question like the ones you just mentioned?"
2) "What would you say are your main sources of information?" (They may name up to three)
3) "If you had to pick one source of information, based on availability, reliability, etc., which one would you choose?"

In answering the first question, 29 out of 30 full time farmers mentioned they use friends and relatives as sources of information, 14 mentioned associations/trade groups, 13 MCCES and 13 stores/salesmen. In answering the second question about their main source of information 21 out of 30 mentioned friends/relatives first, 4 mentioned associations/trade groups first, 3 MCCES and 2 stores/salesmen. However, of the 17 who gave a second source of information 8 mentioned stores/salesmen, 4 MCCES, 4 association/trade groups and 1 friends/relatives. Of the 6 who listed a third source of information 5 mentioned MCCES and 1 mentioned the media. Therefore, farmers consult with friends and relatives first and frequently and turn to MCCES, Stores/salesmen and association/trade groups to confirm what they learned from friends and to answer their remaining questions. We assume that the friends and relatives who are consulted by the farmers are also farmers.

It is important to note that MCCES is only one of several sources of professional information. Stores/salesmen and associations/trade groups provide keen competition. Other sources of information which farmers were asked about were government agencies educational institutions, and the media. Of these sources only the media was mentioned (3 times) in answer to the first question. Among the professional sources of information MCCES seems to have the best reputation. In answer to the third question about the preferred single source of information 10 of the 20 who answered the question mentioned friends/relatives, 8 mentioned MCCES and 2 mentioned associations/trade groups.

A somewhat different picture emerges from the survey of 28 randomly selected full time farmers from the list of MCCES users. These farmers are much richer than the average full time farmer in the county and they are more concerned about managerial problems than the previous group. They also use consultants heavily. They are much less likely to mention friends and relatives as their source of information and they give a fairly permanent role to MCCES which is to be expected since they were selected from the list of MCCES users.

The unusual set of concerns and unusual means of obtaining information by these 28 farmers is related to their unusual prosperity. Of the 14 who volunteered information on their gross receipts for the previous year 1 said $20,000, 1 said $145,000 and 12 said $200,000 or over. Of the 20 who answered the question on their problems or concerns 8 mentioned marketing or prices, 7 mentioned managing (including labor and financing problems or issues), and 4 mentioned inflation and interest rate problems. In addition to these managerial problems, 6 mentioned pest and weed control, 4 herd health and nutrition, 2 land use, and other problems were mentioned only once.

This group of farmers is distinguished by the large number of sources which they used. On average each used over five categories of sources. In answering the first question about sources of information which they need 27 of the 28 mentioned MCCES, 24 friends/relatives, 22 media, 17 stores/salesmen, 16 associations/trade groups, 16 "other" (which 8 specified as consultants, 5 specified as veterinarians, and 3 did not specify), 12 educational institutions and 8 government agencies. It should also be noted that they might use several specific services or persons in each category, eg. TV, radio and several types of printed media for information on markets, prices or new products.

The major sources of information for this group of predominantly rich full time farmers are MCCES and consultant/veterinarians with friends/relatives having a much less important role than for the previous group. In answering the second question on their main source of information 12 mentioned MCCES first, 7 consultants/veterinarians, 4 friends, 4 media, and 1 association/trade groups. Sources mentioned second were 8 MCCES, 6 friends, 4 consultants/veterinarians, 3 media, 3 association/trade groups, 2 stores/salesmen, 1 government agencies, and 1 no answer. For third place, no answers increased to 7, 5 mentioned friends/relatives, 4 media, 3 MCCES, 3 associations/trade groups, 3 stores/salesmen, 1 educational institutions, 1 consultants, and government agencies. Therefore, 23 out of 28 of these full time farmers mentioned MCCES in the top three sources (average number of sources was over 5), 15 mentioned friends/relatives in the top three, and 12 mentioned consultants/veterinarians.

The importance of MCCES as a source of information is also reflected in the answers to the third question about their preferred source of information. Twelve mentioned MCCES, 8 consultants/veterinarians and only 1 mention of each of the other categories (except educational institution was not mentioned at all) plus 3 no answers. Since this sample was drawn from MCCES users, we expected MCCES to be included by these farmers among their sources of information, but we did not expect MCCES to be so prominent among the list of sources.

Finally, we look at a number of follow-up questions to the second question about the respondent's main source of information on agricultural/horticultural concerns. The combined sample of 238 users of agricultural/horticultural information are grouped by their answer to the second question as follows: the 92 respondents who list MCCES as the first main source, the 58 who list friends first, the 18 who list educational institutions first, and the 64 who list some other source. The sample population is of 238 is made up of thirty respondents from each of eight groups mentioned earlier. The topics which we examine in this section are frequency of use of the information source, satisfaction with it, mode of contact with it, and use of the information.

The first follow up question asked about the frequency of use of the source. The educational institutions and other sources were used on average more frequently (64.7% and 78.1% indicated "regularly" or "often" respectively) by users who listed them first than were MCCES and friends (48.4% and 57.2% respectively). On the criteria of satisfaction with the service, however, MCCES is scored as highly (72.6% of respondents selecting MCCES rated the service very good or excellent) as educational institutions and other professional sources (77.7% and 70.3%) rated these services as very good or excellent respectively). In contrast friends/relatives were rated much lower. Only 40.4% of those selecting friends/relatives as their first source rated them as a very good or excellent source.

The four different sets of first listed main sources had very different modes of contact as might be expected. Most (92.3 %) users of MCCES as the first listed main source of information "usually contacted" it by telephone compared to 68.4% of those who first listed for friends, 77.8% for those who first listed educational institutions and 35.5% for those who first listed other sources. Office visits and class/workshops were also more common for MCCES (27.2% and 18.5% respectively) and educational institutions (27.8% and 38.9%) than for friends (10.5% and 0%) or other sources (14.5% and 8.1%) In contrast site visits were more common for friends (43.9%) and other sources (25.8%) than for MCCES (6.5%) or educational institutions (0%).

Regardless of which source was selected first, over 90% of inquiries claimed to have used the information they received. They differed, however, in whether the information benefited farm, home, garden business or something else. Most (59.6%) of those who selected friends/relatives first applied some of the information they obtained from friends to their farms compared to 38.4% of those who selected MCCES first or 11.1% of those who selected educational institutions first. (A greater percentage of friends/relatives selectors applied some of the information to home than did selectors of other sources, but a greater percentage of MCCES selectors applied the information to their gardens than did selection of other sources. Finally a much greater percentage of educational institutions selectors applied the information to their businesses than did selectors of other sources. It should be remembered that these users of agricultural information most commonly selected MCCES (92) and friends (58), as their most important source of information.

In sum, MCCES has demonstrated that is a valuable source of agricultural/horticultural information. Most full time farmers, however, will use their informal relationships with friends and relatives first but frequently turn to MCCES for more professional advice. They also use stores and salespersons and other sources of professional expertise. Nevertheless, MCCES is the most highly ranked on average among these professional sources. In contrast the richer full time farmers which were on the MCCES user list used many different sources and relied heavily on consultants and MCCES and less heavily on friends.

# INTERNATIONAL PROGRAMMING IN THE COOPERATIVE EXTENSION SYSTEM

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## Abstract

A national project entitled "Understanding World Agriculture" is described and analyzed. An overview of the project is presented first, including its purpose, current and future activities, and project funding and management. Results and implications of a study that was conducted to provide baseline data on the organizational capacity for international programming in selected state extension service is presented next. Finally, educational materials developed for the project are described.

## PROJECT DESCRIPTION

### Purpose

"Understanding World Agriculture" is a three-year project (1984-1987) designed to mobilize the resources of the Cooperative Extension Service (CES) to enhance citizen understanding of the political, economic, technical, and social factors relating to world problems of hunger and poverty and to the stake of the U.S. in international development. It responds to the Congressional mandate (contained in the Biden-Pell Amendment to the International Security and Development Act of 1980) to the Agency for International Development (AID) to facilitate widespread public discussion, analysis, and review of the issues raised by the 1980 Report of the Presidential Commission on World Hunger.

The project is aimed at the clientele of the Cooperative Extension Service which represents a broad cross section of the American public. While rural and agricultural people are major Extension client groups, as many urban as rural individuals are served.

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Extension has worked traditionally with both men and women as well as with youth through 4-H clubs, the Future Farmers of America (FFA) and the Future Homemakers of America (FHA) in secondary schools. The Service has documented that its 15,000 agents reach more than 50 million people each year through direct contact or by radio, television, and printed materials.

## Activities

In the first year of the project (1984-1985), a handbook for use by Extension personnel was developed. Part I highlights relevant research on the issues of hunger and poverty, the history of U.S. development assistance with emphasis on agriculture, and the implications for U.S. security and economic well-being. Part II presents guidelines for calculating the impact of development and trade on the agricultural sector of individual states and communities. Part III features a series of case studies of current, effective development education programs and materials, with special reference to those used by Extension.

Toward the end of the year, the participating states hosted regional meetings for leaders of the Cooperative Extension Service in neighboring states to introduce the handbook and encourage initiation of similar projects.

Activities in the second and third years (1985-1987) will focus on the preparation and testing of educational materials based on the handbook and on the training of Extension agents in their use. Participants will also reach out to Extension personnel nationwide through a variety of activities designed to promote integration of development themes into ongoing programs of the Service. Among others, a mini-grant competition will be conducted each year to support the production of local materials in other states.

## Project Funding and Management

Activities under this project are funded by a development education grant from the Agency for International Development and by matching contributions of personnel and other items of expense from the Consortium for International Cooperation in Higher Education (CICHE) and the Cooperative Extension Services of the four participating states. CICHE is a private, non-profit corporation comprised of six major higher education associations. One of the members, the National Association of State Universities and Land Grant Colleges (NASULGC), provides technical coordination for the project in consultation with a national advisory committee. Staff include Frank H. Klassen, CICHE President; James W. Cowan, Project Director; and Joan H. Joshi, Project Manager. Earl Teeter, Leader, International Programs, USDA Extension Service serves as technical consultant to the project.

Each participating state's staff of the Cooperative Extension Service work with a local advisory committee to carry out the strategies outlined above. The states represent four geographic regions of the United States and they coordinate regional project activities. These states are Georgia, Michigan, Rhode Island and Utah.

# ORGANIZATIONAL CAPACITY STUDY

## Purpose

The purpose of this project component was to assess the current level of institutional support and capacity for an international public education dimension within the Cooperative Extension System of selected Land Grant Universities. The results represent baseline data that will be compared to similar data collected in the future to determine impacts of the total project.

## Methods

Eleven states contributed to the assessment: the four participating in the project (Georgia, Michigan, Rhode Island and Utah) and seven randomly chosen from within regions (Vermont, New York, Arkansas, Wisconsin, Indiana, Oregon and New Mexico). The study consisted of two components: 1) a survey of one-third of each state's field staff focusing on attitudes and practices related to international programming; and 2) telephone interviews with spokespersons for the respective CES administrations concerning their state's capacity to support international programming in Extension. The surveys and interviews were conducted in the winter of 1985-1986.

## Results

Based on the results of the survey of 888 CES staff from eleven stats, Extension field staff are basically very supportive of an international dimension for CES. They feel that it is important to clarify the University's role in international programs and to incorporate an international dimension in regular CES programs. Although they appreciate that not all clientele may be interested in these issues, they feel a sense of responsibility to bring international issues to the awareness of clientele.

A large proportion of CES staff (41%) are pursuing their own self-development about international issues as they characterize state support for training as "poor." Already approximately one-third of field staff are programming to some extent in this area. Yet staff also admit that most programming is sporadic and weak. The two areas of programming strength are in agriculture and 4-H, yet even these programs received very weak ratings of administrative commitment. In most areas of encouragement and training, staff rated the state administrative support as being "poor to fair."

Based on the telephone interviews with 28 administrators, the states in this sample illustrate fundamental weaknesses on all three dimensions studied--institutional commitment, structure, and capacity for support. The four participating states stand out as having more of the necessary ingredients for successful programming than the others, but even then, spokespersons in these states recognize the tenuous nature of their efforts. Among states not affiliated with the project, only half have made progress and then only on some of the elements described in this study. On the whole, much work needs to be done. The presence of the project seems to have had a catalytic effect already--especially among the participating states. The opportunity to network and share resources that CICHE provided in the regional meetings also helped to encourage discussion and recognition of this area of programming for other non-affiliated states.

## Discussion and Implications

Public education programming focused on international issues is both a new and an old programming concept in Extension. On one hand Extension has a long history of involving clientele in cross-cultural experiences--hosting international visitors, sponsoring youth, and to some extent, adult exchange programs and involving clientele in appreciating cultural and life-style similarities and differences across societies. Agricultural programs have also included international trade issues in marketing education efforts. These international programming initiatives are widespread across the states.

However, as indicated in the field staff surveys, these efforts are not sufficient to meet current demands and programming concepts. As our interdependence in the world becomes more and more evident, citizens need a better understanding of a wide range of social, economic and politically oriented international issues. We have moved past the cultural awareness stage of programming to a new era of issues analysis and concrete education on international concepts. The most visible of the current issues is international agricultural trade and foreign aid. The farm community is concerned for their very livelihood. The status of international markets and factors influencing those markets are of prime interest to them. Citizens need to understand how the international trade scene is changing and the potential role of developing countries as markets for U.S. products. Yet this type of programming dialog is relatively weak in Extension. Why? Why has the land grant system not responded sufficiently?

Actually, agricultural trade, per se, is reported as a relatively strong and comprehensive program in most states. But the foreign aid and understanding of international development links are weak. It may be that international themes are bypassed because local staff lack the expertise and confidence to deal with these complex and often controversial issues. Although field staff report that they rely on University and outside expertise, these experts may or may not be available when needed.

When it comes to international issues, field staff have fewer direct channels into the University structure. Most extension specialists are not familiar with international issues themselves. The internationalists on campus are not necessarily readily available to the extension system. Therefore a fundamental weakness in our organizational structure needs strengthening. An international programs office, international contact person, or specific department representatives are useful in facilitating the matching of off-campus need to university expertise. Likewise such linking is needed for staff training, materials preparation and programming support.

The results of these surveys suggest that field agents have positive attitudes toward providing an international dimension in their CES programs. But they also hesitate to take on new commitments. Those who have ventured into the area of programming seem to have taken the initiative themselves. States may need to review how they assign leadership to this area of programming. As with any new program initiative, state leadership is needed to create momentum and efficiency of effort. Field staff indicate a need for resource materials, training, organizational support and programming strategies. A key strategy is to "integrate" these international issues into ongoing efforts. International education can be part of marketing and economic development programs, part of public affairs education, part of leadership development efforts, etc. "Integration" as a programming strategy was only mentioned by one-half of the surveyed states and yet holds the key for overcoming one of the strongest barriers to international programming--that of time constraints. By integrating and incorporating these issues, international programs do not need to compete with other program priorities.

## PROJECT MATERIALS

### Handbook

A three-part handbook entitled Solving World Hunger: The U.S. Stake (Wennergren et al, 1986) has been published. Principal chapters in Part I deal with "The World Food Problem," "The History and Nature of U.S. Foreign Assistance," "U.S. Economic Assistance and International Trade," "Benefits of International Collaboration in Agricultural Research" and "Food Sufficiency and Political Stability." Parts II and III, already described, are aimed at strengthening the capacity for individuals and organizations to use the information in public educational situations.

### Slide/Tape

This is a companion to the handbook and graphically highlights major concepts. Six slide sets, one for each chapter and an overview, also are accompanied by a curriculum and discussion guide.

## CONCLUSIONS

The potential is great for a strong viable internationally-oriented educational thrust in the Cooperative Extension System. CES has a national networking capacity already facilitating resource sharing; organizational structures within the University system and within Extension potentially capable of catalyzing action; a cadre of professional staff with positive attitudes and feelings of responsibility toward internationalizing extension, and a history of international programming strength in at least two program areas--4-H and Agriculture. The framework is present, but a number of elements which some states are dealing with need attention. Among these are:

1. Lack of administrative action to back verbal commitments.
2. Poorly established lines of responsibility for backstopping and field support.
3. Lack of staff and educational resource development plans or program.
4. Competition for staff time among more traditional, more familiar programming demands.
5. Poorly articulated educational objectives and/or formulated thrusts in the internationally-oriented area.

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# FUNCTIONAL SKILLS-EXPERIENTIAL LEARNING OUTCOMES OF THE VOLUNTEER 4-H LEADER

Patricia A. Howe[1]

## Abstract

This study investigated the influence of selected life situation and personal characteristics of the functional skills experiential learning outcomes of adult volunteer 4-H leaders. Besides such demographic factors as 4-H membership as a youth and tenure as a volunteer leader, the individual's learning style and self-esteem were of particular interest.

Data were obtained from a self-selected sample of 134 adult leaders, representing 48 of the 50 United States, at the National 4-H Center in Washington, D.C. A variety of instruments was used, and findings were mixed, with most significant relationships found between experiential learning outcomes and the following independent variables: levels of formal education, primary occupation (other than farming) and levels of exposure to the 4-H organizational hierarchy.

## INTRODUCTION

Although people learn from hands-on, actual experiences, the extent and degree of that experiential learning appear to differ from individual to individual. What are some of the variables in a person's life that might affect functional skills or experiential learning outcomes, and how might we go about investigating them? This study was designed both to take a look at some of the myriad of variables that possibly affect a person's learning from doing and to gather data for Extension as it plans its programs for volunteer adult 4-H leaders.

### Variables Map

To organize the almost endless list of independent variables in a study such as this, an initial step in design was the construction of a "Families of Variables" map (see Figure 1). Precursors, considered to be the primal category on the map, were defined as education; previous volunteer experience (in and out of 4-H); 4-H affiliation as a youth; learning style as defined by Kolb (1974); self-esteem as measured by Coopersmith (1981); selected demographics; and motivation for entry into 4-H volunteer activity. Content of the experience referred to length of time already spent on the activity; the actual job done; the amount of time and commitment expected of the individual in the activity; the degree of responsibility involved; training received; and contact with supervisory professionals. Interaction included the feelings of support on the part of the volunteers; feelings of mastery of subject matter; time spent on the activity; and feelings towards paid staff. Finally, Outcomes, the dependent and therefore most important variable on the map, was defined as the perceived knowledge gained and transferable, learned skills acquired through the individual's adult volunteer 4-H leader experiences (see Figure 2).

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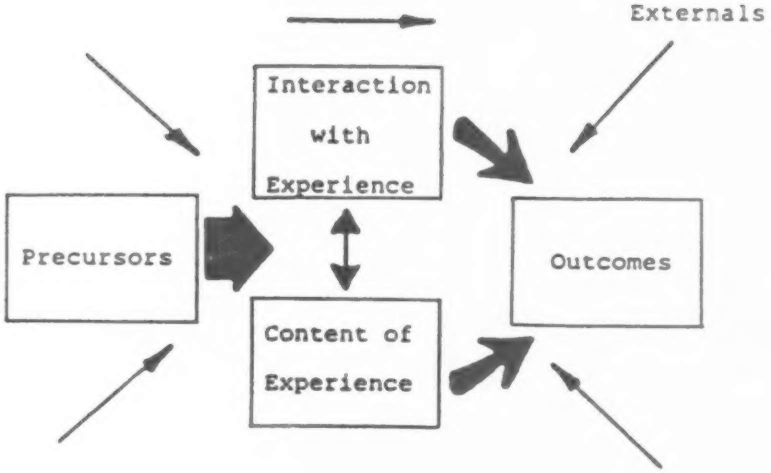

FIGURE 1. FAMILIES OF VARIABLES

A. Precursors

- formal education
- previous experience
- former program affiliation
- learning style
- self-esteem level
- motivation for entry
- demographics

B. Content of Experience

- length of time in activity
- type of experience
- time demands (expected)
- commitment demands (expected)
- degree of authority
- training received
- nature of contact with supervisor

C. Interaction with the Experience

- feelings of support
- feelings of mastery
- amount of time spent
- intensity of involvement
- feelings towards paid staff
- level of confidence

D. Outcomes

- knowledge
- functional skills

FIGURE 2. FAMILIES OF VARIABLES

## METHODOLOGY

### Hypotheses - Related Questions

Nine hypotheses and four open-ended questions were developed for this study, all based on the central question: what influences experiential learning outcomes?

HYPOTHESES

1. There is a direct positive relationship between self-esteem and functional skills learning.

2. The leader with an accommodator learning style will exhibit a greater degree of experiential learning outcomes than the learner designated as diverger, converger, or assimilator.

   Proposition: There will be more leaders with an accommodator learning style than any other style.

3. There is a positive relationship between age and functional skills learning outcomes. Older leaders will score higher on the dependent variable measure.

4. There is a direct positive relationship between formal education and experiential learning outcomes. Those individuals with more formal education will show greater degrees of functional skills learning.

5. Those individuals who were 4-H members as youths will learn more experientially as adult leaders than those who were not.

6. Being engaged in other volunteer activities contributes to functional skills learning.

7. The longer one serves as a volunteer leader, the greater the functional skills learning that results.

8. Leaders who live in a rural locale will show higher degrees of experiential learning than those who do not.

9. Being occupied primarily as a farmer or farm wife will contribute in a positive way to one's functional life skills learning.

QUESTIONS

1. Are females more likely to learn experientially than males?

2. Is primary occupation, in addition to farming, a factor when an individual's functional skills learning is assessed?

3. Are the types of duties one performs as a leader significant when assessing his or her experiential learning?

4. Do the areas of leaders' responsibility have any influence on the degree of their functional skills learning outcomes?

## Population

An opportunity sample of 134 adult volunteer 4-H leaders in attendance at the National Center in Washington, D.C., served as the primary population for this study. Thirty-five of these leaders were chaperons for youths from their states, participating in the Citizen Washington Focus program, during the summer of 1982; the remainder journeyed to the Center for national leader forums between the fall of 1982 and spring of 1983. Twenty-eight participants were male.

In the interest of generalizability of findings, a smaller comparison study of a more heterogeneous group of leaders in Charles County, Maryland, was conducted, as well. Twenty-one adult leaders participated.

## Instruments

Four instruments were used to measure the variables of this study: Personal Criteria Questionnaire (PCQ); Kolb's Learning Style Inventory (LSI); Coopersmith's Self-Esteem Inventory (SEI); and Howe's Self-Assessment Skills Inventory (SASI). The former three instruments surveyed the independent variables, while the SASI, developed specifically for this study, served as the dependent variable measure. (Further information on all instruments available from the writer upon request)

## Data Analysis

The two primary statistical procedures employed in the analysis of data were one-way analysis of variance (ANOVA) and the t-test of significant difference. In addition, partial correlations were performed on the data collected from farm/homemaker participants. ANOVA's were used to show the extent of the relationships between each of the independent variables and the dependent measure. The t-test was used to test for significant differences between the primary population of participants at the National Center and the smaller group in rural Maryland; to compare leaders' results by the communities they lived in; and to test for significant differences in having spent less than three years at other (than 4-H) volunteer activities and more than three years.

## FINDINGS

Those characteristics appearing to show a significantly positive relationship with functional skills learning outcomes included certain levels of formal education, primary occupation (other than farming), and levels of exposure to the 4-H organizational hierarchy. The findings did not support the remaining personal and life situation characteristics hypothesized as bearing significance on an individual's functional skills experiential learning outcomes: self-esteem, learning style, age, 4-H membership as youths, being engaged in other volunteer activities, tenure as a volunteer 4-H leader, type of community lived in, being a farmer or farm wife, gender, or types of duties performed within the 4-H organization.

## IMPLICATIONS FOR PRACTICE

The findings in this study may contribute not only to the field of voluntarism as a whole but also to Cooperative Extension, as the parent agency of 4-H. Both during the field work portion of the study and in actual data collection/workshop sessions, the farm homemaker volunteer 4-H leaders, particularly, appeared to be rather self-effacing and lacking in self-confidence. "All I do is ..." and "I am only a ..." were phrases heard often. In light of this observation, consideration might be given to encouraging farm homemaker leaders to become more involved in activities at the various levels of the organization. Because the members of the population sample who had had exposure across the organizational spectrum reported significantly higher levels of learning outcomes, there is reason to speculate that farm homemakers would benefit from this exposure, as well.

Further, in planning programs and making assignments, learning style should be considered. Those leaders with an accommodator or converger learning style would be well matched with hands-on types of duties, while the strengths of divergers and assimilators would be best utilized in program planning and development.

In addition, the findings regarding training needs should be of interest to Extension as it plans for leader training in the future. There was an expressed need for training in the area of child/adolescent psychology. Many leaders commented that though they had learned experientially in this area, in some instances there had been considerable pain.

Those leaders who were or had been teachers by profession stated rather emphatically that the training and experience they had had in their profession were invaluable to them in their volunteer youth work. While not all volunteer youth workers can be trained to be professional teachers, there are rudimentary steps that can be taken.

The desire for more parental involvement in their youths' activities was mentioned by many participants in the study and warrants attention. Professional staff could be very helpful in this instance, providing encouragement and support to those volunteers who are not comfortable asking for favors or requesting help from others. Leaders seem to feel that not only would their work be made even more pleasurable by increased parental involvement, but also the youths, themselves, would greatly benefit from having Mom and Dad involved in their 4-H activities.

Also, many participants in this study stated a desire for more and improved communications between themselves and the professionals with whom they work. Finally, findings in this study should be a source of especial encouragement to suburban leaders and the professionals who work with them. Their data showed, contrary to the hypothesis, that they learn significantly more from their volunteer experiences than do their rural counterparts.

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# RELIABILITY AND VALIDITY STUDIES OF THE OHIO COOPERATIVE EXTENSION SERVICE ASSESSMENT CENTER

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## Abstract

The overall assessment ratings (OAR's), and performance ratings of Extension County Chairpersons on the sixteen dimensions of the Ohio Cooperative Extension Service assessment center were analyzed to provide answers to objectives addressing validity and reliability concerns. Selected independent variables included: age, gender, extension program area of emphasis, and perceptions of assessment center. The results indicated high dimensions intercorrelation, high assessee perception of the assessment center, and an inter-rater reliability value of .79. The overall assessment center exercise reliability was .95 and factor analytic studies indicated two underlying factors. Gender, and major area of program emphasis were not found to be significantly related to assessment center performance while county chairpersons' perceptions of the assessment center was found to be significantly related to their performance on the assessment center.

## INTRODUCTION

This study was conducted as part of on-going efforts to appraise and improve the Ohio Cooperative Extension Service (OCES) assessment center. As noted by Cummings and Schwab (1973), systems for the appraisal of job performance in modern organizations are designed to accomplish two major purposes: organization control and individual development. Individual development, according to Cummings and Schwab, may be fostered by designing appraisal systems that help to improve performance directly by aiding the employee in identifying areas for improvement and growth. The OCES assessment center was developed to be such an appraisal system. According to Thornton and Byham (1982, p. 1):

> An assessment center is a comprehensive, standardized procedure in which multiple assessment techniques such as situational exercises and job simulations (i.e., business games, discussion groups, reports, and presentations) are used to evaluate individual employees for various purposes. A number of trained management evaluators, who are in direct supervisory capacity over the participants, conduct the assessment and make recommendations regarding the management potential and developmental needs of the participants. The results of the assessment are communicated to higher management and can be used for personnel decisions involving such things as promotion, transfer, and career planning. When the results are communicated to the participants, they form the basis for self-insight development planning.

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The Ohio Cooperative Extension Service (OCES) assessment center has been developed to assist in the analysis of current managerial abilities and future training needs of employees in supervisory positions. The assessment center forms part of a continuing effort to develop and maintain high quality supervisory staff who will provide balance and assure effective, timely programs. The OCES assessment center incorporates exercises that enable participants to demonstrate their skills and abilities on sixteen job-related dimensions. These dimensions are: oral communication, written communication, leadership, perception, sensitivity, objectivity, initiative, planning/organizing, development of coworkers, decision making/judgment, behavioral flexibility, assertiveness, organizational sensitivity, management control, evaluation, and collaborativeness (OCES, 1984).

Although previous studies, beginning with the American Telephone & Telegraph (AT&T) Management Progress Study and subsequent evaluation of operation programs, have concluded that assessment centers showed high predictive validity for criteria such as salary, managerial level, and performance ratings (Bray and Grant, 1966; Bray, et al., 1974; Campbell and Bray, 1967; Moses, 1972), there was also a need for each user to ascertain the validity of the program as applied in one's own organization (Moses and Byham, 1977). The 1978 revision of Standards and Ethical Considerations for Assessment Center Operations did not require validation by each new adopter, but they warned that prior research did not guarantee validity in a new setting (Thornton and Byham, 1982). A related concern has been how managers and assessees would accept an assessment program. The need to establish the validity and reliability of the OCES assessment process, if it was to be used to make judgments about the present or future performances and further developmental needs of personnel, could therefore not be overemphasized. Furthermore, the need to understand personnel involved in personnel development and program delivery efforts in extension had never been greater, for such knowledge would help us to accurately diagnose each individual's unique needs and capabilities and enable us to design remedial courses for improvement where and when necessary.

The specific objectives that directed this evaluation study were: (1) to examine the inter-relationships among the assessment center dimensions; (2) to investigate the reliability of the assessment center exercises; (3) to investigate inter-rater reliability of assessors; and (4) to determine if assessees' gender, program area of emphasis, and perceptions of the assessment center affected their performance on the assessment center.

## METHODOLOGY

A descriptive-correlational study was utilized to obtain data on the nature and strength of relationships between the variables in the study. Mail questionnaires, and a videotape instrument were used to gather data for the study. Three sets of data were used in this study. The first set of data was collected with mail questionnaires from assessees, the second set was collected from assessors with videotaped interviews as instruments, while the third set was collected from personnel records.

The first section of the mail questionnaire consisted of ten items and measured assessees' "perceptions of the assessment center," while the second part was utilized in the collection of the following personal information: age, gender, and program area of major responsibility.

The second set of data used in this study was collected in a follow-up study of assessors for the purpose of establishing inter-rater reliability of assessors. The videotape instrument utilized for collecting this information was comprised of four shortened, separate fifteen-minute assessment center interviews dealing with the same topic but featuring different interviewers and different interviewees. Assessors were required to view the videotape and rate the performance of each of the candidates.

The third set of data was obtained from personnel records of the Ohio Cooperative Extension Service and consisted of assessee's performance ratings on the sixteen dimensions of the assessment center and also the overall assessment rating.

Face validity of the instrument was determined by the researchers with help from faculty and graduate students. Copies of the entire research instrument were submitted to a panel of four experts in the subject area of extension personnel development and evaluation to be evaluated for content validity. The panel of experts determined that the subscale contents had been adequately sampled.

A Cronbach's alpha reliability coefficient of .82 and a 30-day test-retest reliability coefficient of .79 were obtained for the subscale "perceptions of assessment center."

## DATA ANALYSIS

Descriptive statistics, involving measures of central tendency, frequencies and percentage distributions were computed to describe assessees on the variables of the study. Correlational techniques were used to determine the nature and strength of relationships between the variables of the study. One-way analysis of variance was used to compare groups on selected variables at the .05 significance level. Factor analysis was conducted on assessment center performance data to see if the conceptually separate assessment center domains were empirically independent.

## FINDINGS

### Assessment Center Reliability

The overall assessment center reliability was computed using assessees' consensus scores on the sixteen assessment center dimensions. The results showed a Cronbach's alpha reliability coefficient of .95.

### Inter-rater Reliability of Assessors

Data obtained from assessors' ratings of an assessment center videotape instrument were analyzed to test for rater agreement. An inter-rater reliability value of .79 was obtained.

### Factor Analysis of Dimensions

Assessees' overall mean scores on the sixteen assessment center dimensions were subjected to factor analysis to determine the extent to which the conceptually separate domains were empirically independent. Results of the principal components factor analysis using oblique rotation yielded two underlying factors. Factor one had an eigen value of 9.08 and accounted for 57 percent of the variance. Eleven dimensions loaded on this factor. Factor two had an eigen value of 1.60 and explained 10 percent of the variance. Five dimensions loaded on factor two. Factor one was identified as representing planning and interpersonal relations while factor 2 represented an executive function. The correlation between factor one and factor two was .55 indicating substantial positive association between the two factors.

The Pearson Product Moment Correlation coefficients computed between dimensions indicated low to high positive intercorrelations among the dimensions. The highest correlation of .79 was between "leadership" and "initiative" whereas the lowest correlation .19 was between "sensitivity" and "assertiveness." Most of the dimensions correlated above the .50 range.

Correlations between the assessment center dimensions and overall management rating indicated moderate though substantial to very strong association.

### Age and Gender and Perceptions of Assessment Center

The relationship between age and assessment center performance was low and positive. This relationship was, however, nonsignificant at the .05 level ($r=.14$, $p>.05$). There was no significant relationship between gender and assessment center performance ($r=.06$, $p>.05$), however, a significant relationship was found between candidates' perceptions of the assessment center and assessment center performance ($r=.35$, $p<.01$).

### Extension Program Area of Major Responsibility

The study showed that extension county chairpersons with major area of program responsibility in Home Economics received a higher mean "overall assessment rating" score ($X=2.89$) than county chairpersons with major area of responsibility in Agriculture ($X=2.79$), and 4-H and Youth ($X=2.77$). A one-way analysis of variance performed on the means showed that there was no significant difference between the means of the three groups.

### Overall Assessment Rating

The distribution of respondents on the dependent variable (overall assessment rating) is shown in Table 1.

Table 1. Frequency distribution for overall assessment rating of assessees as rated by assessors

| Performance Category | Number of Assessees | Percent | Cumulative Percent |
|---|---|---|---|
| Meeting management expectations is questionable (1). | 4 | 5.0 | 5.0 |
| Could meet normal management expectations with development (2). | 25 | 31.3 | 36.3 |
| Should meet normal management expectations (3). | 32 | 40.0 | 76.3 |
| Should exceed normal management expectations (4). | 19 | 23.7 | 100.0 |
| Total | 80 | 100.0 | |

Mean = 2.83; Median = 3.00; Mode = 3.00; Standard deviation = .85; Range = 3.00.

## SUMMARY OF FINDINGS

### Assessment Center Dimensions

High inter-correlations were observed among the assessment center dimensions. Most of the dimensions correlated above the .50 range. Also, correlations between the assessment center dimensions and candidates' performance (as reflected by the overall assessment rating) indicated moderate through substantial to very strong association. These generally high inter-correlations and the presence of two highly correlated underlying factors from factor analysis, pointed to the existence of a common underlying factor which defined performance.

### Reliability and Validity

The OCES assessment center was shown to have high reliability as indicated by a Cronbach's alpha reliability coefficient of .95. An inter-rater reliability value of .79 was obtained. These values indicated acceptable reliabilities for both the assessment center exercises and inter-rater consistency respectively.

Content validity of the assessment center was based on the thorough job done by the job analysis committee in developing the assessment center. As noted by Jaffee and Sefcik (1980), an assessment center developed on the basis of a job analysis was inherently content valid. This viewpoint was shared by the authors. County chairpersons indicated that overall, the assessment center measured important qualities required of extension county chairs. This was interpreted as evidence for face validity.

### Gender, Program Area of Emphasis, and Perceptions of the Assessment Center

Gender was not found to be significantly related to assessment center performance. Thus the OCES assessment center is a valuable tool for assessing extension county chairpersons irrespective of their gender. A similar finding was made for major areas of program responsibility (program emphasis).

County chairpersons' perceptions of the assessment center was found to be significantly related to their performance on the assessment center. Thus, county chairpersons who perceived the assessment center favorably also obtained higher overall assessment ratings than their counterparts who had a low regard for the assessment center.

## CONCLUSIONS AND IMPLICATIONS

The OCES assessment center is a reliable and valid tool for use in assessing extension county chairpersons of the Ohio Cooperative Extension Service for the purposes of diagnosing developmental needs, stimulating candidate self evaluation, and as a research base upon which design of remedial action for managerial development may be furthered.

The absence of significant relationships between gender, major area of program emphasis, and assessment center performance established no need for further studies involving possible differential validity for gender and major area of program emphasis. The need to educate assessment center participants about the procedure is reflected in the fact that assessees' performance was significantly related to their perceptions of the assessment center. It is hoped that a positive attitude will result from providing adequate information about the assessment center procedure. The OCES assessment center may be adopted and adapted for use by other cooperative extension organizations. Studies already conducted on the dimensions and exercises would save time, money, and effort on replication efforts by these organizations.

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# PERCEPTIONS OF THE EFFECTIVENESS OF 4-H VOLUNTEER KEY LEADERS AS HELD BY KEY LEADERS AND COUNTY 4-H AGENTS IN OHIO

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## Abstract

This study was conducted to identify the relationship of selected variables with the perceived effectiveness of 4-H volunteer key leaders as held by county 4-H agents in Ohio and the key leaders with whom the agents worked. The implications of this study indicate that 4-H agents and the key leaders perceived the position of key leader as beneficial to the 4-H program. However, certain demographic information concerning the key leader volunteer may not be as valuable as previously thought. This information could also affect volunteer training.

## THE PROBLEM--OBJECTIVES

4-H has been cited for being one of the most cost effective and successful programs in education and government. One reason for this has been the ability of a very small corps of professional 4-H agents to teach large numbers of volunteers who, in turn, work with hundreds or thousands of youth (Sterling, 1984). Others have stated that if the quality and quantity of existing 4-H programs are going to be maintained, volunteers now and in the future will become increasingly more important (Henderson, 1981). If these statements are correct, which suggest that without volunteers we cannot maintain the quality, quantity, effectiveness, and success of the 4-H program, then learning about our volunteers is vitally important.

One very important subgroup, among this essential component of extension, is a group of volunteers who work with both agents and youth and have been labeled as key leaders in Ohio. For the purpose of this study, key leaders were defined as those who have been utilized in specific 4-H subject matter areas, 4-H organizational responsibilities, and/or 4-H activity responsibilities. They have functioned as a link between the local volunteers and/or 4-H members, advisory committees, and salaried 4-H staff.

Questions raised in Ohio concerning these key leaders were: How effective do 4-H volunteer key leaders perceive themselves and to what extent do county 4-H agents perceive them as effective? Specific questions related to this overall question were: Were key leaders increasing the quantity of projects, activities, and/or events offered through the county 4-H program? Were key leaders increasing the quantity of people reached through the county 4-H program? Finally, were key leaders improving the quality of projects, activities, and/or events offered through the county 4-H program? Perceptions of key leader effectiveness in this study were defined by the amount of positive impact the work of key leaders was believed to have had on the county 4-H program based on the above questions.

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This study was conducted to identify the relationship of selected variables with the perceived effectiveness of 4-H volunteer key leaders as held by county 4-H agents in Ohio and the key leaders with whom they worked. The major objective of the study was to identify and describe 4-H volunteer key leaders in Ohio and perceptions they and agents held of their effectiveness. In addition, the study was to determine if there were relationships between certain characteristics of these key leaders and their degree of perceived effectiveness in the county 4-H program.

## METHODOLOGY

A stratified random sampling process was used to select the 4-H agents involved in the study which resulted in selecting the county 4-H agent from 60 percent of the counties included in the identified population (41/69). All five Ohio extension districts were represented as strata in the study with frame and selection errors controlled by accurate and current lists. These lists were examined to avoid duplication of names. The resulting sample of 41 counties was reduced to 29 after 12 counties reported that they had no key leaders in their counties in accordance with the definition used for this study. Therefore, the final sample size for the county 4-H agents was 29.

Forty percent of the 4-H volunteer key leaders were randomly selected (n=238) from each of the 29 counties that had reported key leaders. Again lists were reviewed for duplication of names. Usable data were received from 97 percent of the agents and 79 percent of the key leaders in their respective samples. No significant differences were found between respondent and nonrespondent key leaders (Miller and Smith, 1983).

The questionnaires were developed to collect descriptive and attitudinal data. The key leaders and the agents were asked to respond to 13 statements concerning perceptions of 4-H volunteer key leader effectiveness. In addition, the agents were asked to complete two open-ended statements concerning the greatest benefit and the biggest drawback of using 4-H key leaders. Other data collected were related to sex, marital status, 4-H advisor experience, tenure as a key leader, level of education, and 4-H membership experience of the key leaders. The agents also reported their tenure.

Both questionnaires were pilot tested for reliability. Validity for the questionnaires was established by face and content validity procedures using selected state 4-H staff and faculty at The Ohio State University.

The perception statements were analyzed by summing them and calculating a mean score given by respondents of each population. Frequencies and percentage distributions were calculated for all questions. Significant relationships among and within groups were determined by using t-tests, analysis of variance and the post-hoc Duncan procedure.

## FINDINGS AND IMPLICATIONS

### Perceptions of Effectiveness

The total group of key leaders and county 4-H agents perceived key leaders to be relatively effective. A mean of 3.56, on a scale of one to five (five represented perceptions of the highest effectiveness and one represented the lowest), was noted on key leaders' perceptions of their own effectiveness. Using the same scale, the county 4-H agents rated key leaders' effectiveness as 3.75. Although the county agents rated the key leaders' effectiveness higher, no statistically significant difference between perceptions as held by key leaders and agents was noted.

From the 13 items identified as measuring effectiveness in the county 4-H program as a result of using key leaders, improved quality was identified as having the greatest effect on county programs.

Four-H volunteer key leaders were perceived to increase the quality and/or quantity of the 4-H program. Key leaders were also perceived to increase the number of people reached through the county 4-H program. (See Table 1.)

These findings indicated that 4-H agents and the key leaders perceived the position of key leader as beneficial to the 4-H program. With this information in mind, the agent must determine how to capitalize on this valuable resource.

Table 1. Mean and Standard Deviation of Key Leaders' and Agents' Responses by Item

| Perception of Change in County 4-H Program as a Result of Key Leaders as Measured by Item | Key Leaders | | Agents | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| 1. Reaches an increased number of youth | 3.84 | .76 | 3.86 | .87 |
| 2. Offers a wider variety of projects | 3.49 | .92 | 3.43 | .94 |
| 3. Has improved in quality | 3.93 | .96 | 4.21 | .82 |
| 4. Offers an increased number of projects | 3.23 | .97 | 4.18 | .66 |
| 5. Offers a wider variety of activities | 3.55 | .89 | 3.18 | .97 |
| 6. Offers an increased number of activities | 3.55 | .90 | 3.57 | .98 |
| 7. Has made an increased number of people aware of 4-H | 3.82 | .81 | 3.32 | .86 |
| 8. Offers new activities | 3.45 | .95 | 4.03 | .82 |
| 9. Is better than it otherwise would be | 3.25 | .92 | 3.82 | .89 |
| 10. Allows 4-H'ers to gain more knowledge | 3.75 | .80 | 3.32 | .98 |
| 11. Offers more diverse projects | 3.58 | .78 | 4.00 | .60 |
| 12. Has introduced new projects | 3.17 | .95 | 3.93 | .75 |
| 13. Offers more diverse activities | 3.65 | .83 | 3.47 | .96 |
| Grand Mean | 3.56 | .58 | 3.75 | .63 |

* 5 points, Likert-type scale
1 = very ineffective; 5 = very effective

## Description of Key Leaders

The majority of the 4-H volunteer key leaders studied were female (58 percent); had experience as a 4-H club advisor (80 percent); had been a key leader for three or more years (60.5 percent); were married (82 percent); and were 4-H alumni (67 percent). Tenure as key leaders was one to two years for nearly 1/3 of the sample subjects (31 percent). Twenty-four percent reported to have been in the key leader position for two or three years and 36 percent reported to have held their position as key leader for more than three years. Nine percent of the key leaders failed to report their years of tenure. One in five or 20 percent of the key leaders surveyed had no experience as a 4-H club advisor.

## Comparisons Among Key Leaders

When comparisons of perceptions among key leaders were examined in relationship to certain demographic data, some interesting information was obtained. Key leaders with no experience as a 4-H club advisor held perceptions of their effectiveness that were significantly lower than those held by key leaders with over 10 years of experience as an advisor. There were no significant differences in perception scores among key leaders with one to five or six to ten years of experience and any of the other tenure groups concerning 4-H club advisor experience. Forty-three percent, less than a majority of the agents studied, perceived key leaders who had experience as 4-H club advisors to be more effective than those who did not.

These findings have some important implications for agents who are targeting key leader recruitment programs only to those who have 4-H club advisor experience. Note that the only key leaders with significantly higher perceptions of their effectiveness than others as related to club advisor experience were those with over 10 years of experience as a club advisor. This, along with the finding that less than a majority of agents find key leaders with club advisor experience to be more effective than those without, indicates that agents should not limit key leader selection to those with only 4-H club advisor experience. Based on this research, the only way the researcher would justify such a policy would be to recruit key leaders only from 4-H advisors with over 10 years of experience.

Key leaders with three or more years of tenure as a key leader held perceptions of their effectiveness that were significantly higher than those held by key leaders with one or two years of tenure. Thirty-six percent of the agents studied perceived key leaders who had held the position three or more years to be more effective than those who had held the position less than three years. Again, less than a majority perceived three or more years of tenure to be associated with increased effectiveness of key leaders.

These findings, related to the tenure of key leaders and perceptions of effectiveness, indicate that lower tenured key leaders may perceive themselves as being less effective than agents perceive them to be. An important related implication is that especially lower tenure (less than three years) key leaders need to be recognized and praised for their work as key leaders. Agents need to let these leaders know how they perceive key leaders' efforts.

Surprisingly, key leaders who had no 4-H membership experience held significantly higher perceptions of their effectiveness than did those who were past 4-H members. The researcher believes this may be because the 4-H alumni have higher expectations of themselves than those with no 4-H background. Maddalena (1980) found that volunteers usually give their time and effort to the institution in proportion to how much they value the institution. This value is, in part, a result of their gratitude for benefits received from the institution. Thirty-six percent of the agents studied perceived key leaders who had been 4-H members to be more effective than those who had not. The other 64 percent perceived no difference between key leaders with and without 4-H membership experience or utilized only 4-H alumni or those who were not alumni as key leaders. None of the agents reported to perceive 4-H alumni to be less effective than those with no 4-H membership experience.

This finding also has implications for the agent concerning recognition of key leaders. Four-H alumni may need some extra encouragement and recognition for their work to help them feel as though they are giving time and effort to the 4-H organization in proportion to what they gained from 4-H.

Other perceptions of effectiveness were noted comparing key leaders with different characteristics. Specifically, females were perceived as being no more effective than males by over 89 percent of the agents. Over 46 percent of the agents perceived key leaders with a college degree to be no more effective than those without a degree. Furthermore, 3.6 percent of the agents perceived those key leaders with a degree to be less effective than those without a degree. Married key leaders were perceived to be no more effective than single leaders by almost 75 percent of the agents.

## SUMMARY

The two greatest benefits of using key leaders, mentioned most often by 4-H agents, were that they could give 4-H members more in-depth knowledge or skills and could free the agent from certain time commitments. The biggest drawback of using key leaders, as reported by the agents, was the amount of time involved in the initial selection, training, and organizing of key leaders.

As the data suggests, certain demographic information concerning the volunteer may not be as valuable as previously thought. How much should be taken into account when recruiting key leaders in regard to college degree, 4-H alumni status, previous experience as an advisor, tenure as a key leader and gender? The characteristics most common among key leaders in Ohio have no strong associations with either agents' or key leaders' perceptions of the effectiveness of key leaders.

The implications for 4-H agents include that more importance should be given to the training of key leaders rather than the consideration of demographic information. Furthermore, why do an overwhelming majority of the key leaders fall into "traditional" categories such as married, 4-H club advisor, and 4-H alumni? Are agents ignoring a potential audience of equally effective key leaders because of misconceptions concerning the ability of certain people to serve in the capacity of a 4-H volunteer key leader?

As adult educators, agents must develop a training program to meet the needs of key leaders and consideration should be given as to where or in what specific subject areas or activities key leaders can best be utilized for maximum effectiveness.

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# RE:FIT: CAREER CHANGE OPTIONS FOR WELL DEFINED DISLOCATED WORKER POPULATIONS

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## Abstract

The farm crisis has created a new dislocated population. The success of a program designed for this clientele group has led to the assumption that by definition and treatment of a dislocated worker population as unique, programs can be successfully implemented that enable the dislocated worker to be better prepared for the job search through a divergent counseling strategy.

## Background

Much attention has been given to the postindustrial society emerging in the U.S. today (Ashley, 1984). There is a growing awareness of global markets and the international exchange of labor and technology. In many industries labor intensive duties have been replaced by technology and service has arisen as the growth sector (Economic Policy Council, 1985). This shift of the American society from manufacturing to high tech and information has given new applications to the definition of the labor force. It has, in essence, redefined the types of employment opportunities for the majority of the population; redefined the basis of educational needs for even moderately paying jobs; and redefined the economic mix of manufacturing and services, education, finance, insurance, real estate and other "white collar" jobs. This shift has at the vertex, real people who are being displaced or dislocated. These workers have been "caught up in the...deindustrialization, technological innovation, industrial restructuring, and worldwide shifts in international trade and investments. The...result has been long-term structural unemployment for a large population of American workers whose jobs, once the envy of the world, disappeared." (Bieber et al, 1984) The recession of the early 1980's forced many workers out of employment. Although the economy has rebounded, many workers remain unemployed, underemployed, or facing unemployment in the future. In part, this can be attributed to the technological advancements of firms which have had massive layoffs and then been retooled for production, but "many experts believe that the problems associated with plant closings will continue as the transition from an industrial to a postindustrial economy proceeds" (Ford, 1983).

## Need

There have been many programs designed for dislocated worker populations. This paper is not concerned with the national policy issues surrounding dislocated workers, but rather is centered on one viable option in dislocated worker assistance for local and immediate implementation. A review of counseling materials validates the following assumption: the greatest majority of career counseling and placement programs are based on invergent career decision strategies. Focusing on specific jobs or careers appears to be the norm rather than the exception. Counseling normally assumes that there is a clear choice in career options. Training and retraining is also assumed as a viable option, but education is considered by most individuals as a "risk endeavor". They risk the time and investment costs for education on the hope that a position will be available in that field upon completion of the training. In a study done by Gordus et al, only 15% of workers in a displacement program with training options took advantage of the retraining process (1981).

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Statistics suggest that for dislocated populations, these traditional approaches are not necessarily appropriate. Most dislocated workers had long tenure on their previous jobs (Gordus, 1986); dislocated workers tend to come from occupations with disproportionate shares of layoffs or, as is more often the case, technical evolution that simply negates the necessity for the position and these workers will statistically experience long-term unemployment (OTA-ITE-250, 1986). Meanwhile, normal unemployment, or full employment, has risen from around 3% in the 1960's to over 6% today. In real numbers, this change represents literally hundreds of thousands of workers who are classified as unemployable or chronic unemployed.

As educators we are faced with a multi-level problem. Dislocated workers face not only the trauma of a job loss, but a change in lifestyle as the income from their traditional work is probably much higher than the wage offered for the emerging jobs in the service or light manufacturing sector (Wolansky, 1984). Therefore, attitudes, expectations, and fiscal management are problems that must be addressed. It is not sufficient to direct a dislocated worker to a new job unless, of course, the job is similar or identical to the position lost. The educational process must be more than placement, it should include adjustment to the situation and a basis for crisis support.

## Program

The "rural crisis" that has been focused primarily in the plains' states is beginning to affect Ohio's rural communities. Estimates are that 15%, or 200,000 of the U.S. farmers and ranchers are in severe financial difficulty and that the impact of this is most severe for middle-sized farm operations (National Governors' Association, 1986; Lovan, 1985). In Ohio, it is estimated that between 2,000 and 5,000 farmers will leave farming during each of the next five years (Henderson, 1986).

These farmers are being identified as a "new" dislocated population. In this context, dislocated population refers to persons with same skill or similar skill backgrounds who have been forced or are being forced from their occupation. This definition is in line with that offered by Kolberg et al as "people who are unemployed and unlikely to return to their previous occupations because their skills have become obsolete or because of structural changes" (1983). For this population, the changes are structural as the changes in production technology, growth as a function of inflated dollars and interest rates to purchase now devalued land, and decrease in export demand are industry based, not individual induced (Forster, 1986).

As with many agencies and organizations, the Ohio Cooperative Extension Service (OCES) has programs designed to help people become better at what they "do". The OCES is approaching the farm crisis from two very different but compatible angles. The first is financial management programs, production efficiency improvement efforts, and other programs designed to aid farm families remaining in the industry. The second approach is a program designed to help farm families identify all options available to them while counseling them to neither stay in nor exit from farming. This approach has been named Rural Economics: Farmers in Transition (RE:FIT). RE:FIT allows OCES to work as the "firm" in outplacement services such as counseling, career options and referral assistance. The program utilizes the historic credibility farm families have in the Extension service to provide them with reassessment of their own marketable and salable skills and interests.

RE:FIT is structured in three distinct parts. The first is a program to aid farm families in identifying indicators for change (social, emotional, and family as opposed to production and economic) in the early stages of their crisis. The second component, **From Farming To...**, addresses the potential in the farm family for nonfarm employment. The third section is referral to agencies, organizations, and counselors who can give the family members specific assistance according to their needs.

This paper examines the applicability of the second section to other dislocated populations. It is important to understand the basic structure of **From Farming To...** to realize the transferability of the approach. In RE:FIT, the process and the materials developed are inseparable. The process is a mix of crisis counseling, career planning, self-assessment and referral. The materials were developed as steps in the process for facilitating 1) acceptance of the situation; 2) understanding transferrable skills from farming to other occupations; 3) realizing comparable interests between farming and other occupations; and 4) exploring career/job options. Participants are self-selected. The process begins with a "Preliminary Discussion" to collect demographic and knowledge baseline data, provide the implementor with information necessary to know which components of the program will be useful, and introduce items to be discussed to the farm family members participating.

The first instrument is a transferrable skills inventory. The tasks were identified using data from a DACUM (Developing A CurriculUM); an approach to occupational analysis. These tasks were then compared to occupational clusters identified by the (then) U.S. Office of Education with relevant tasks listed in a transferrable skills inventory under clusters utilizing comparable skills. The instrument is a "user friendly" three choice questionnaire which for each of the nine tasks under ten clusters asks if the participants "Do and Like to Do", "Do but Don't Like to Do", or "Don't Do" the task listed. After completion the implementor discusses answers identifying at this time what each cluster represents.

The same data were used to develop a simple interest inventory in which participants must choose from five or six tasks, situations, or environments what task they would most prefer to perform assuming they can do all tasks listed. This inventory is then used to demonstrate to the participants that many of the conditions and requirements they enjoy in farming can be found in other occupations and jobs.

The third step is the use of one of three existing job search programs that match interests and abilities of the farm family member with occupations. Following the implementation of these three steps, the implementor is able to discuss with the family members what options exist for referral. These are grouped in four sections: 1) Community Services; 2) Training/Retraining; 3) Job Skills & Placement; and 4) Alternative Farm Enterprises.

The following preliminary data illustrate the effect of RE:FIT on 28 farm families. The average age of the participants is 39.7 years although individual ages range from 19 to 71 years of age. Fifty-two percent of the sample is male. Tenure on the farm averages 24.2 years. Even with projected combined nonfarm incomes, 87.5% believe that income would be insufficient to sustain the family if they remain in farming. Of the respondents, 25% believe that current nonfarm income could sustain the family if there were no farm debt (carried into the future). All respondents believe that the farm crisis is affecting their daily living patterns with over 4/5 blaming the farm stress for other problems in their personal lives.

At the beginning of the session, the majority of the participants felt they had "a lot of skills" or "some skills" that would be marketable, yet no individual was able to name specific skills. A few were able to list employment areas or occupational clusters. One-fifth of the respondents felt they could find employment using skills and interests from farming. Although half the participants had, at some time, prepared resumes, only 8.3% had ever prepared a functional resume (focusing on skills and life experiences not just work history and educational background. Nearly two-thirds of the respondents stated they would not know what to expect in or how to prepare for a job interview.

The data following are rankings assigned by the implementors to the families regarding observations and evaluations of knowledge prior and subsequent to the treatment (RE:FIT). The instrument utilizes a five-point scale with a five (5) ranking being given to strongly agree and a one (1) for strongly disagree. Three (3) receives a neutral.

Prior to treatment, 18.2% of the respondents were perceived as being aware of their skills transferrable from farming to other occupations with the mean score at 2.64. Following the RE:FIT program, 100% strongly agreed or agreed that the participants were aware of their transferrable skills (x=4.09). Similarly, 27.3% were aware of interests that could be applied to job search prior to the program and 100% were aware of such interests post-treatment (x=3.91). Over half the families considered themselves in a crisis situation, yet only 18.2% of the participants had given serious consideration to nonfarm income as a means of surviving or "getting through" their farm crisis. Conversely, 18.2% of the family members felt they were not in a position to seriously consider nonfarm employment opportunities post program with a mean of 1.91.

The program structure was given a mean score of 4.09 with 91% of the respondents agreeing that the structure is effective. The question addressing the effectiveness of the materials in letting the clients learn about transferrable skills also rated a mean of 4.09 with 100% agreeing or strongly agreeing. The only score higher was regarding the clients learning of interests through the materials with a mean score of 4.18.

## Applicability of RE:FIT

The materials designed for RE:FIT are predicated upon the belief that although heterogeneous as individuals, farmers have work and life experiences that may define them as a uniquely homogeneous group. It was also assumed this population is further separated from other dislocated populations in several ways: the vast geographic distribution of the farmers; each farm unit is an independent operator/small business operation; the lifelong attachment to the career of farming; and the socio-emotional as well as financial interdependence of career and life. These factors and more may create an impact on the farm family that separates their crisis from those of more well defined dislocated populations.

The development of the program relied on both the life and work tasks of this population as defined by the DACUM process. The expert opinion of program leaders in many states led to the application of the broad occupational clusters to the data. The tasks were categorized by superficial relevancy and panels of experts. Once tasks had been assigned to other clusters, the inventories were developed using the structures given by proven adult career guidance materials (Walter,1980; Vetter et al, 1986) in the farmers' own terminology.

The goal in the development of this program was to address the self image of the farmer as a dislocated worker, perhaps the critical element in the success or failure of a dislocated worker program (Hurst, 1985). This self image is often coupled with self blame for the situation (Gordus, 1986) which is very evident in the case of the dislocated farmer. The dislocated worker programs that report continued successes tend to be those that address the concerns and needs of the dislocated individual through counseling (Ashley, 1984).

This would suggest that the RE:FIT process may be successfully applied to other dislocated populations. This approach utilizes crisis-counseling in a one-on-one situation with scripted questions to direct discussion. The inventories used are based on activities farmers do, thus any farmers progressing through the program will be positively reinforced on the transferability of skills from farming to other occupations. The divergent structure of the program serves to aid the individual in accepting the possibility of employment opportunities in occupations that previously would have been ignored as too different from the skills and interests of the individual.

The RE:FIT program may be replicated for any dislocated population that can be defined as uniquely homogeneous. Through the inclusion of life experiences (in RE:FIT the farm family) a population can be uniquely defined to enable a richer application of skills and interests to other occupational clusters. As Hurst discovered, most dislocated workers have an unreal view of themselves and their capabilities: most being negative, limited and underestimated in terms of transferrable skills (1985). He goes on to explain most dislocated workers overlook functional skills which are often the crux of transferrable abilities. The RE:FIT approach tries to address these barriers inherent in dislocated workers.

Preliminary analyses suggest that indeed, the development process and the implementation and evaluation structure can be modified to work with varied but distinctive worker populations. The application of specific job and life skills related to the work experience (tasks and skills inherent in the position) in both transferrable skills and interest inventories can offer dislocated, or dislocating populations positive experiences and help with attitude change. The use of job related skill and interest inventories in comparison with standard occupational clusters can provide a firm or agency with a useful program for displacement assistance. The program does not necessarily lead a dislocated worker to another or equal position, but rather helps the individual discover the range of career opportunities available and perhaps appropriate to them utilizing relative skills and interests. RE:FIT addresses the career and crisis counseling efforts not deductively, but rather expansively and draws on a wide range of life experiences to help the individual internalize the potential for employment in a new or different career.

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# DEFINING HRD - A RESEARCH STUDY ESTABLISHING A COMMON VOCABULARY AND DEFINITIONS FOR HUMAN RESOURCE DEVELOPMENT

Douglas H. Smith[1]

## Abstract

A study is being conducted to develop a consensus on the definitions of words and phrases used in the field of Human Resource Development (HRD). Such a "dictionary" does not presently exist. A panel of HRD and adult education practitioners and faculty were selected to participate in a delphi process to obtain a consensus regarding the definition of over 250 words and phrases. Attention was given to distinguishing between conceptual and operational definitions. This paper describes the study. The complete list of defined words and phrases will be presented in the presentation, and published by the American Society of Training and Development.

## THE PROBLEM - A GROWING FIELD WITH A MINIMAL FOUNDATION

The most rapidly growing field in education today is the educational programming being conducted for employees by employers. Collectively identified as human resource development (HRD), it has become the largest delivery system for adult learning. In a recent report by the American Society for Training and Development, the following facts were cited:

> At least $210 billion is spent annually for employee training and development. This can be compared to $238 billion spent for elementary, secondary and post secondary education.
>
> HRD provides the education for 70 percent of executive, professional and technical workers.
>
> HRD provides most skills acquired after age 25 and all skills for two out of three jobs.
>
> Employee participation in HRD programs has increased in the past five years, as well as the number of HRD professionals.

In a comprehensive study of corporate education, Eurich reports 18 corporations were offering college-level degree programs as of 1985. By 1988, 13 more corporations will also be offering college courses. Lusterman reported, also in 1985, six out of ten employers had started new training programs in the previous two years.

This growth is relatively recent and reflects the base within which it is located, the contemporary workplace. HRD is primarily driven by the immediacy of present needs of the organization. Education and training is developed to orient new employees, retrain present employees, educate staff on new equipment and processes, prepare technical persons for managerial responsibilities (and vice versa) and, increasingly at many companies, provide opportunities for general growth and development within the framework of organizational needs. All this has been done by individual organizations, and, as stated in the ASTD report, HRD programs grew "because they were delivered by no single institution, were the subject of no law or policy, and went on quietly and efficiently, they grew invisibly, a silent postscript to employees formal education."

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Human resource development is a widespread, but, until recently, largely unrecognized discipline. Now, it is becoming distinctly identified in a number of areas - as a needed entity within companies and organizations, as a field of study, and as an economic factor deserving national, even international, attention.

The need for an acceptable, common vocabulary for HRD is critically important at this time. Such a base of defined words and phrases does not presently exist. If HRD is to establish itself as a viable and acceptable field of study and practice, a basic vocabulary is required. HRD, as a field of study, as a profession, and as an area of research and investigation requires a compendium of common, acceptable terms and basic definitions.

The benefits to the field are numerous. They include:

- Clarity of terms for the benefit of persons/students entering the field.
- Use by HRD practitioners in their work, with a common understanding of words and phrases regularly used to describe and implement their professional responsibilities.
- Words within the defined vocabulary can be used as the key words or "descriptors" for establishing a usable bibliographic base of HRD literature and studies. Libraries and other information depositories can develop descriptors based on accepted words and definitions.
- Use of the vocabulary as a framework for categorizing research studies in HRD, facilitating referencing and analysis.

Recognition of the need for this study and the above benefits were recognized by the American Society for Training and Development (ASTD). With the cooperation of the Society's Committee on Research and the HRD Professors Group, this study is being supported by ASTD. Upon completion, early in 1987, the Association will publish the report and list.

## PRESENT DEFINITIONS IN HRD - A REVIEW OF THE LITERATURE

An extensive search was conducted of over 300 current and recent texts and ten periodicals in HRD and related fields. A number of texts and articles gave specific definitions of words or phrases used in the text, but less than 20 texts provided a glossary or list of definitions. No articles in recent periodicals, since 1977, provided a glossary. The source of most definitions came from the related field of adult education. This is understandable since adult education evolved into a discipline and area of study in the 1920's and 1930's. HRD, as an identifiable field originated in the 1940's, and is now evolving into a discipline and area of study and research.

Of the glossaries identified, the ones most helpful were Nadler's glossary in the Handbook of Human Resource Development, the National Council for Adult Education's extensive list of adult learning terminology, Houle's glossary of terms in The Design of Education, the glossary of terms for adult education procedures by Bergevin and Law and Schaefer's glossary of vocational/technical terminology. The other texts provided a minimal amount of additional definitions and/or support for the definitions given in the above texts.

Another source for general reference, and a prime guide for developing the format for the dictionary, were a number of standard dictionaries. Webster's Collegiate and New International dictionaries and the World Book Dictionary were extensively used. They served as a source for seeing how the words and phrases were generally defined.

A potential prime source of definitions, but more difficult to secure are lists developed by specific HRD units of larger corporations. As a good example of such lists, the author obtain a list of definitions prepared by the Nuclear Energy Division of Florida Power and Light. It was well prepared and served as a basic source of a number of training words and phrases.

In sum, the search of the literature in the field, and related fields, provided little in the way of a comprehensive list of definitions. Collectively the identified glossaries and lists provided an adequate reference base for most words and phrases, but many words are given and defined for the first time in this list.

## DESIGN AND PROCEDURE

As of the preparation of this paper (December, 1986) the study is actively being conducted, and the following two steps have been completed.

1. An initial list of words and phrases identified in the literature as being used in human resource development was compiled and sent to an independent group of HRD practitioners and faculty for review. They were asked to submit any words and phrases not included in the original list, and delete words that should not remain. A number of words were submitted, many of which were included in the revised list. The words deleted, including some in the original list, were those that a majority of the reviewers recommended be deleted.

2. A review panel consisting of selected human resource development and adult education faculty, HRD practitioners and consultants, and selected leaders in the American Society for Training and Development (ASTD) were selected and invited to participate in the delphi study. A total of 250 were sent the revised list and asked to indicate both their willingness to participate and their recommendations for words to be added or deleted from the revised list.

The following steps are to be completed, most by the date of the presentation, and will be fully described. The complete report and final list will be published by ASTD, as described above.

3. From the lists returned, a second revision is being prepared and definitions written. One page of definitions is presented at the end of this paper. Attention is being given to distinguishing between conceptual and operational definitions. A single definition is the goal, but multiple definitions are necessary for some words and phrases (e.g., adult education is both a process of learning by adults, and a specific program title for programs conducted in public schools and some community colleges).

4. The list of proposed definitions will be submitted to the review panel. A format for each definition will be developed allowing (1) acceptance, (2)

acceptance with minimal editing, and (3) proposed rewrite. The lists will be returned and the responses compiled and resubmitted to the review panel for a second review. The same format will be followed.

It is anticipated that agreement/consensus will be reached for most words within three rounds. It is also anticipated that agreement of some words and phrases will not be achieved. In these instances an assessment will be made in regards to the degree of difference. If there is a substantial minority accepting a differing definition than the majority, that will be acknowledged as a second definition. If, however, there are single adherents to a preferred definition, they will not be listed in the final list of definitions.

## SUMMARY

This paper and presentation presented a study, presently being conducted, to identify and define a comprehensive list of words and phrases for the field of human resource development (HRD). The study consists of a delphi process to tap the collective expertise of a number of HRD and adult education faculty and practitioners. Such a list, perhaps a more appropriate term should be "dictionary", does not presently exist and is needed for the most rapidly growing area in the general field of adult learning.

Careful attention is being given to the importance of the defined terms reflecting current thought and use. It is not the intention of this study to reject definitions commonly accepted. Neither will it only duplicate all current definitions. Indeed, the lack of a comprehensive list requires a number of terms and phrases to be defined for the first time. It is hoped that, with the involvement of a broad base of contemporary leaders and thinkers from the field, the list will be accepted and used for its ultimate purpose - a common reference by students and practitioners for the advancement of HRD.

## Proposed List of Defined Terms and Phrases For Human Resource Development

**accountability.** A process applied to a program in which responsibility for specified performance, outcome and result is assigned. Usually identified with financial accounting.

**accreditation.** A process of formal recognition and approval of instructional programs by a recognized accrediting organization.

**active listening.** Listening both intelligently and emotionally, and making inferences to the feelings of the speaker and the listener.

**adult.** A person who has reached full physical growth and an age of maturity as defined by law.

**adult education.** (1) A process in which the educational needs of adults, as perceived by themselves or others, are met through organized learning experiences. (2) Educational programming for adults primarily conducted by schools and other community organizations.

**continuing education.** Educational programming for adults primarily conducted by universities or colleges. Also known as continuing higher education.

**extension education.** Educational programming for adults conducted primarily by land grant universities. Also know as cooperative extension.

**adult basic education.** Educational programming for under educated or functionally illiterate adults in such areas as communication, mathematics, everyday coping skills, and citizenship.

**adult learning.** A general term referring to educational programs developed and implemented for adults.

**advertise/advertisement.** The part of promotion that notifies a target population of a specific training program(s).

**advisory committee.** A group of persons, selected because of their expertise, brought together to give advice on a specific project, program or organization.

**affective objective.** See objective.

**analysis.** Systems. An examination of a problem by separating it into manageable parts and determining basic or root causes. Training. Assessing job or occupational performances to determine the needs best satisfied through training, and produce performance data to serve as the bases of a training program design and evaluation.

**diagnosis.** The process of determining the nature of a problem and possible solutions, frequently done by using tests or other appropriate devices.

**andragogy.** An educational process which places primary responsibility for learning upon the learner rather than upon the content to be learned. Initially defined as the science of teaching adults (Knowles, 1980), the term is increasingly being viewed as another process differing from pedagogy which is primarily content centered.

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# REPRESENTATION TECHNOLOGIES IN THE FUTURE OF LIFELONG LEARNING

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## Abstract

The ways in which we represent skilled performance and experience are liable to undergo a transformation in the years ahead due to the new technologies available for handling information. Artificial intelligence will give us synthetic analyses of performance, while random-access videodisc will give us a records management system for the audiovisual documentation of job (or life) experience. The latter technology creates a new class of social archive, opening up new potential dynamics for Lifelong Learning as well as suggesting new institutional roles for the university.

## THE TECHNOLOGIES OF REPRESENTATION

The contours of our electronic infrastructure have only recently begun to take shape with the widespread use of international public databases, several years of PC/mainframe interfacing, and the democratization of the video medium. While a haphazard selection of products and services may become a part of our educational and cultural environment, it is still quite possible to guide the development of our technologies to best serve our model of lifelong education.

Looking at our electronic and information technologies as representational media, mediating between individuals and their world (McCluhan, 1962) allows us to relate tools of apparently limited use to broader potential applications. As these media move us towards more individualization and ever-greater decentralization, individuals, organizations, and communities will feel countering needs to create new representations of their social, spatial, and temporal continuity. Thus, as a host of different socioeconomic dynamics change our world of work and leisure, the education community can play a vital role. Beyond the traditional "marketplace of ideas," the universities could become information clearinghouses of vocational and community representations of themselves and their work.

### Educational Technologies

The Human Resource Development (HRD) field will be the focus of discussion of current educational technologies. With the current emphasis on American productivity, the HRD model is being integrated into the American equation of production and service, exerting a market dynamic which will push new training tools into the educational mainstream. Four categories of tools will be examined: profiling and testing instruments, job and task analyses, videotape (representing real-time audiovisual experience), and random-access videodisc (as a records management system representing the functional dynamics of the system it is modelling).

With several products for interactive profiling and testing now marketed in industry, job/task analysis software coming on its heels, and computer-aided instruction already married to videodisc in the training world, it is not hard to extrapolate new tools which may become a part of our educational environment. However, the tools of HRD are designed to perpetuate a model of "education from above," a mode of development which many lifelong learning advocates are especially wary of (Jarvis, 1985; Gelpi, 1985).

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## New Profiling Capabilities

Outside of the training and development field, active research in the representation of performance and human abilities is being pursued. Artificial Intelligence (AI) and cognitive science research are both concerned with the mechanisms underlying linguistic and sensory "competence" - the ability to recognize and recreate meaningful pattern distinctions. Both fields will probably develop new, synthetic, approaches to profiling tasks; though it is unlikely that they are fully aware of it in this sense, or of their potential impacts on the training and development profession.

Man-machine interface (MMI) studies, however, are one of the applications and funding sources which both AI and cognitive science are interested in. Both MMI and training are traditional disciplines under the Human Factors umbrella. Here, the ultimate aim is to understand both human abilities and task definitions in order to design systems which achieve the best marriage of human competencies with computer "competencies." So the need to represent human ability and task requirements for the specification of systems (and the training required to work with these systems) is where we might expect crossover of new task and personnel profiling techniques to occur from AI and cognitive science into HRD.

## Organizational Memories

A new media is in its infancy. Years' worth of taped "documents" are collecting haphazardly in closets, file cabinets, and bookshelves around the world: videotape is being used for record-keeping purposes. Practically none of it has indexing or documentation attached.

Videodisc transfers allowing computer coding and simultaneous PC-database entry will soon be forced on us. Videodisc allows random-access, which will become imperative to make all these new archives of industrial experience (meetings, construction status reports, critical security incidents, mechanical tests, etc) into efficient and valid record-keeping systems. Conceived of as a documentation system, videodisc will also allow access and retrieval of oral records, exceptional and/or standard performances, job/task debriefings, and exit interviews. Videotape debriefings are being discussed as a convenient way to document computer programming, a job too often left undone.

The loss of experience, through frequent reassignments of key people, job turnover, or lack of documentation (in the design of complex programs or systems) is an everpresent problem for industry. Consider the attraction of an automated interviewer - if an employee handed in his resignation and started out the door, you could ask him to pass on some critical knowledge of his job before he left.

The critical ingredient is an efficient way to elicit key information from interviews, an area in which "intelligent" software already excels. But because of the wide range of task and job descriptions in industry, an effective interview will also rely on preexisting job and task descriptions having been entered into the system. This job, unfortunately, often remains a stumbling block for HRD departments in industry. Though a fully-developed job and task inventory can be the keystone for developing and integrating people into their most productive roles in a company, the rapidly changing job requirements coupled with unresolved issues of job analysis methodologies to be used through the company, often relegate this major effort to the "hold bin." Automated or unautomated, this is a major hurdle for Human Resource Development to cross.

## Vocational Databases..."for want of a nail"

After Three-Mile Island, the nuclear utilities formed the Institute of Nuclear Power Operations (INPO) to help avoid cost, redundancy, and error in the massive training upgrading effort for control room operators being called for. Standardized methodologies were agreed on to allow the task analyses for the operation and testing of unique pieces of equipment to be entered into a common system. Training departments in various parts of the country could query the database and pull out a base document for same or similar equipment configurations to their own; change and/or validation which was done to support their own equipment training would be reentered along with the original. This industry-wide model was only accomplished due to a disaster threatening the whole industry; for total investment of effort, INPO's is perhaps the most exhaustive vocational database in the U.S. today.

The U.S. Military is the single biggest HRD establishment in the country. Many of the existing instructional systems methodologies originate in the Department of Defense. Perhaps due to this fact, each of the services uses a variety of task analysis methodologies and/or systems. While each generally cross-indexes job/task descriptions to a basic file, which is cross-indexed to civilian jobs - my discussions with several training agency directors didn't suggest the dynamic inter-system interaction which is clearly possible. Yet, with no fully-standardized methodology having taken hold, this is understandable. Initiatives to automate task analysis seem to also have a spotty history in the various branches of the military.

Zemke and Kramlinger (1982) discuss ways to choose between various approaches to job and task analysis; with so many classes of purposive action, no single method holds for all situations. This would almost presuppose an agreed-upon theory of knowledge - a territory being reopened by AI, cognitive science, and information science. No doubt these disciplines will create workable, plastic solutions to the processes attending meaning (such as attention, vigilance, pattern preference, etc.), and new ways to analyze work will be forthcoming. These will be more flexible since they will be built on new paradigms of "information," and "pattern." They will have to be. They will have to handle new, subtler, man-machine interfaces: system activities will be governed by newer, more powerful theories, yet the success of the interface will be in the operator's intuitive grasp of the automated behavior. The operator will ultimately be the last window of control in the work of any system, as Bopal and Chernobyl are testimony.

General working standards covering the constituent categories of work would be welcomed by many. Since the last updating of the Dictionary of Occupational Titles (DOT) in the mid-seventies, there has been repeated interest in finding some way to allow job and task analysis done by this country's employers to be developed according to standard criteria and then entered into an INPO-like database (Craig, 1984). Obviously, with rapid changes in the workplace, the costs of an independently developed and updated DOT are prohibitive.

As of this year a commercial software package to do basic job analysis is on the market. Others will certainly follow. A vocational glossary exists in Houghton-Mifflin's public database - "The Guidance Information System" - with information on 1025 occupations cross-referenced to 215 military and 3000 civilian jobs (Cuadra/Elsevier, 1986). The Social Security Administration has apparently just completed a project which uses a synthetic approach to updating existing task descriptions in its file, prior to validation and reentry. This may well be a state-of-the-art; even so, developments in the vital area of representing the skill and knowledge requirements of our vocational world are only progressing in fits and starts.

Tools, no matter how powerful, often go unused. If a general agreement on the representation of work did occur, and a national database were created, it may still not generate alot of use outside of the military and the highly-regulated industries. A powerful software tool to do the kind of performance analysis which Gilbert (1978) has developed might sell well and not be extensively used. It may turn out that the integration of useful information into activity may be more related to the methods by which the information is gathered by a user than to the utility and ultimate value of the information itself.

So while it is very likely that the burgeoning HRD marketplace may spin off new technologies, and introduce major new efficiencies in the way training is specified and work systems are developed, it is also possible that these technologies will not be put to effective use. They may also have little to offer in direct, practical applications to education.

## AN EDUCATIONAL INFRASTRUCTURE

Looking at Lifelong Learning in its widest sense, Gelpi (1985 ) states:

> "Rediscovering and reconstructing educational and cultural space is a cultural activity in itself: the workplace, the municipal and village structure, leisure places, the different expressions of community life can be occasions for cultural and educational development." (Ibid., p.113)

Ivan Illich (1970) speaks of creating "learning webs" which link individuals to their environment of 1) things, 2) models, 3) peers, and 4) elders. All these interactions, in fact, are the proving ground of an individual's drive to create a stable world of meaning. So any discussion of educational/cultural infrastructures should take Illich's four categories of resources into consideration across the spectrum of educational and cultural environments which Gelpi (1985) and others (Verduin and McEwen, 1984) continue to remind us are part of the public's sphere of educational and developmental action.

### An HRD Tool for the Community

My concept of a practical tool is one which the Rotary will buy two of: one for themselves and one for the firehouse. A software-prompted video interviewer could eventually fit this bill - especially if the social and community-development implications of the new toy were understood.

In industry this tool would be used because it is lazy and nonthreatening. The crossover to the community would not take long to make. The implications of Illich's "learning web" suddenly become obvious once we realize that videorecords of organizational or community experience can be put onto an on-line database. Illich was thinking of using tape recorders for collecting and transmitting oral histories in and among villages in the developing countries. In the developed nations, church and service organizations would be likely vehicles for collecting and disseminating community experience; more importantly in the trades, the unions and professional organizations would have an even bigger stake in creating a "web" of experience - for internal continuing education and the networking of expertise, as well as for guiding young people into their field.

### The Information System for Vocational Decisions (1965-1969)

In the early days of computers at the Harvard Graduate School of Education, the concept for an educational tool was hatched (Tiedeman, et al. 1967). The Information System for Vocational Decisions (ISVD) was to put the individual in touch with a database of vocational information. The student (or individual at some developmental decision-point) could explore a representation of the vocational world which allowed them to work through simulated "situations" typical of the branching programs of that time. The system was to let the individual develop his/her own profile while guiding them through the process of making informed decisions.

ISVD prototype development was to have begun in 1969 if Federal funding held out; it didn't. Yet, even had Tiedeman and others been able to bring their brainchild to the school, the problem of maintaining a reasonable facsimile of the vocational world would have been a major stumbling block, as it still is for American industry and the military.

A national vocational database could be built. As mentioned above, however, utilization of such a tool doesn't clearly warrant the effort required to get it underway. Our discussion of an automated interviewer alters the picture, for while corporate trainers might not use a national vocational database to prescribe their training, an automated interviewer could base its prompting strategy on generic job and task information. The idea to use such a database to create an ISVD adds a new dimension to the issue. Not only would it support this country's training and HRD, but it could also provide a long-needed interface between the educational establishment and the world of work.

## Tying the Strands Together - The University's Role

Tools such as an automated video interviewer/documentation system will most assuredly come about to help collect and disseminate job and trade-related information. Yet the power or "intelligence" of such tools will be greatly enhanced by common databases. So while any number of independent producers may be close to marketing such a tool, their ultimate success will rest on establishing compatibility with whatever is to be the "lingua franca" of analyzing work.

It is likely that AI and its related disciplines, under the aegis of the Human Factors field, will develop such a standard, allowing us new ways to represent and understand work itself. The potential benefits of developing a national vocational database accrue more to the educational system than to industries, who could develop their own. But, in the long run, all industries would benefit from such a system, built on standard modes of analyzing work.

Not only could such guidance and educational systems as ISVD be established - allowing students to explore a new class of oral history and vocational experience - but the university can take an active role as the true "marketplace of ideas" of all sectors of community and vocational life. As the locus of the largest computer infrastructure outside of government and industry, and in their traditional role as the "seat of citizen sovereignty"(Piel, 1986), they are the natural hub for Illich's grass roots "learning webs" -as inimical as this may seem to Illich's argument to disestablish the school .

Certainly, our educational and cultural space is changing. The Lifelong Learning paradigm seeks to influence that change towards a more humanistic conception of society. All of our current structures of knowledge and information will flex somewhat as this change comes about. By actively developing the educational tools of industry so that they may be integrated into educational constructs of our making, we stand a better chance of achieving our goals. Waiting for HRD to hand us its tools may not lead us to the same place.

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# MISSING PIECES IN THE EVALUATION OF EXTENSION TRAINING PROGRAMS IN DEVELOPING COUNTRIES

Dr. Rose L. Jones[1]

## Abstract

The ineffective training of agricultural extension agents has contributed to the failure of extension systems to impact on the lives of small-scale farmers in developing countries. Evaluations of extension training programs and subsequent program adjustments have rarely led to more effectively trained agents. A more thorough investigation of the curricula is proposed as a way to better understand the agricultural extension training problem. Predictions of what might be discovered if curricula evaluations were more substantive are offered.

## INTRODUCTION

For the past 25-30 years, a number of agricultural extension system models have been implemented in the developing world to bolster the production capabilities of small-scale farmers. Despite these efforts, the small-scale farmer's plight has not improved significantly and, in some cases, has steadily deteriorated.

One of many weaknesses in the existing extension systems has been lack of effectively trained extension agents (Lele, 1975, Erozer, 1977; USAID, 1984). This paper examines the inability of existing intermediate agricultural extension training institutions to graduate technically competent, grassroots extension agents. The failure to use in-depth curriculum evaluation is seen as a crucial factor contributing to the ineffectiveness of agricultural training programs and is the crux of this discussion. Finally, recommendations for future directions are proposed.

## AN EMERGING PICTURE OF EXTENSION AGENTS AND THEIR TRAINING

The emerging picture of extension agent effectiveness in the field is a bleak one. Extension agents are frequently hampered in doing their job by a lack of transportation, inadequate facilities--both office space and fields for demonstrations--lack of moral and fiscal support by their administrative organizations, lack of agricultural inputs, bureaucratic requirements to accomplish non-extension related tasks, little locally-appropriate, research-based information to extend, and large service areas (Lele, 1975; FAO, 1980; Stevens, 1981; Keya, 1983). Also, extension agent motivation is often reduced because of low salaries and almost no career ladders (Turay, 1982). Extension agents' ineffectiveness has also been linked to a failure in the type of training they have received (Lele, 1975; Sigman, 1981; USAID, 1984).

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In addition to the literature which indicates that extension agents lack sufficient training, reports of extension training institutions' weaknesses exist (Sestan 1976; Erozer, 1977; Stevens, 1981; Turay, 1982). Those weaknesses include: (1) no overall training objectives, (2) no knowledge of the positions graduates will have upon program completion, (3) reliance on teaching techniques which stress memorization of knowledge rather than an understanding of knowledge, (4) the institution's faculty not understanding the problems of area farmers, (5) a failure of the institutions to gain area farmers' confidence, (6) lack of follow-up data from which to improve existing programs, (7) little emphasis placed on the need for knowledge of the rural social system, (8) over-emphasis placed on high technology mechanization, (9) lack of teaching staff experience, (10) no interdisciplinary approach to training, (11) no linkage between the training institutions and the research centers, (12) little contact between the training institutions and the surrounding farmers, and (13) lack of financial support from the Ministry of Agriculture.

Nearly a decade of reports contain suggestions for improving the effectiveness of agricultural extension agents by strengthening the training programs from which they graduate. And yet, these training programs have been virtually impotent in producing highly qualified extension agents. The task of systematically scrutinizing the curriculum must be undertaken in order to ascertain where the roots of the problem might truly be.

## CURRICULUM EVALUATION: ITS CURRENT STATUS

"Curriculum" is being broadly defined to encompass all that affects the educational process (Zais, 1976). Such a definition encompasses a training institution's goals and objectives, its subject matter offerings, the learning activities used, and its evaluation procedures for measuring both student achievement and program effectiveness. In addition, such a definition permits one to acknowledge the impact of education's foundational areas--philosophy and the learning theories. Identifying what curriculum aspects of agricultural extension training institutions are being routinely evaluated is of concern here. More importantly, an attempt will be made to determine whether there are pieces of the curriculum evaluation process that have been neglected.

Evaluation is seen as an information seeking/information analysis process which is primarily designed to aid in decision making. Such a definition is consistent with some major models used in educational evaluation (Popham, 1975; Anderson and Ball, 1978).

The evaluation process is also viewed as a supporting actor in the curriculum planning and implementation process. Program developers use context evaluation to help describe the educational setting in which a program is to operate. Input evaluation is used to answer program structuring questions. Alternative strategies for program delivery are explored in such an evaluation. Process evaluation is used at the implementation stage to determine if procedural problems are emerging that would prevent a program from reaching its goals. Summative evaluation is used to evaluate the outcomes of a program and to help decision makers determine if the program should be continued, modified, or discontinued.

Another key element gleened from existing evaluation models is that program phases should be contingent upon each other--one flowing from the other (Stake, 1967). In addition, intended outcomes and observed outcomes should be congruent. A third key evaluation consideration is that program goals should be evaluated for their worthwhileness. Finally, unintended outcomes of a program should be evaluated.

Scrutinizing the literature on agricultural extension training institutions in developing countries, one is able to formulate some impressions of the curriculum components being evaluated. The picture, however, is not particularly clear. Information on the processes used in educational programs is scant. Havelock found this to be true when attempting to ascertain educational innovations in the developing world (Havelock and Huberman, 1978). However, what becomes apparent quickly is that there are some key curriculum components which are not receiving attention. In many cases, the validity of the goals themselves remain unchecked. Also, linkages between the institution's goals and objectives and the philosophy of rural development, education, and extension have remained unexamined. Students' interests and needs are not being ascertained in many cases; perhaps due in part to the frequent use of a technical curriculum design which is not particularly interested in student needs. Another area which has not received close scrutiny is that of overall curriculum design. Does the subject-oriented design or the technical curriculum design really help the training institution achieve its goals or are there other designs which better serve the purposes of extension training? Close scrutiny of teaching methodology and learning activities are rare. The interrelationship of courses has not been addressed. The segmented course of study remains a part of many training institutions' curriculum. Generally, an "eye-ball" inspection of the courses taught and the proportion of theoretical knowledge to practical experiences seems to be the extent of content evaluation. Monitoring a training institution's progress appears to have taken precedence over formative evaluation.

Most evaluation activity has taken place at the end of a program or project. Reports of student achievement, goal attainment, and general impressions of project/program success have been given. Because of major gaps in evaluation at early program stages, summative evaluations have not been as useful as they might have been (Havelock, 1978).

## WHAT IF CURRICULUM EVALUATIONS WERE CONDUCTED?

The following is a projection of what might be discovered about agricultural extension training institutions in developing countries if a plan for systematic curriculum evaluation were implemented.

The major discovery might be that the curriculum design, the course of study, and evaluation of students' achievement do not possess the threads of congruency and contingency to hold them together. Despite the generally stated goal of preparing students to become extension agents that can help the farmer help himself/herself, a curriculum design exists that concentrates on subjects and/or specific tasks that an extension agent might perform on the job. Despite the cry for extension agents that have the capabilities of diagnosing a multitude of rural problems, a course of study exists that is fragmented, unable to aid the student in seeing the interrelationship of information and skills being learned. Written exams which test whether a student has accumulated a certain level of knowledge exist despite the need for exams that test how students apply the information learned in class to field settings.

Results of the literature review indicate that there may be a need for a different curriculum design, a different structuring of courses, and a different means of evaluating student achievement. Less reliance on subject-matter or technical designs and more reliance on curriculum designs promoting the development of problem-solvers seems warranted. Designs that promote the interrelatedness of subject areas may enable extension training institutions to better reach their desired goals. Less reliance on a course of study around subjects and more reliance on problem areas or process skills appear useful. Content could then be used as the resource it should be instead of the structural pillar of the curriculum that it now is.

Related to course structure is the scope and sequence of the content within the courses. Little attention has been given to how much content should be covered and to what degree the content from the various subject-matter areas should be related. An evaluation of scope and sequence would probably detect some of the reasons why extension agents are often unable to combine knowledge from various subject areas when attempting to solve problems.

Another discovery might be that the country's development philosophy and the training philosophy have not been thoroughly integrated. Two questions need answering: (1) Is this training institution's philosophy compatible with the rural development philosophy of the country? and (2) Can the development and the training philosophy be "seen" in all that is done in the preparation of extension agents?

A final discovery might be that the developing country lacks the trained staff to conduct a curriculum evaluation. Donor agency programs are often short-lived and often aimed at easily detectable results. Their evaluations are frequently conducted by personnel external to the program. Their evaluations usually come near the end of projects and are conducted in a matter of days. A major weakness in evaluation appears to be at the formative level and the developing country personnel are probably the most appropriate ones to conduct such an evaluation at these training sites. This means that agricultural educators at these extension training institutes need to be well-versed in both the theory and practice of curriculum and evaluation. A partial explanation of why design problems have gone undetected is probably because few of the people currently evaluating the extension training programs have had a solid background in curriculum development.

## SUMMARY

Evaluation can be a key contributor to decision making at all stages of program development. Some information exists regarding the extent to which curriculum evaluation is used in measuring the effectiveness of agricultural extension training programs in developing countries. Although curriculum evaluation is being conducted, gaps exist within the process which hinder program developers from truly identifying the strengths and weaknesses of their programs. Once these gaps are closed, it is predicted that the overall effectiveness of the training programs will be increased and that its impact will be seen in the development of a more competent, effective agricultural extension agent.

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# UNICEF: A CHILDREN'S PROGRAM WITH HIGH ADULT EDUCATION IMPACT

Victoria J. Marsick[1]

## Abstract

While children are the primary beneficiaries of the United Nations Children's Fund (UNICEF), its programs include a wide range of adult education -- public, community, health and transformative education. This paper describes the organizational context that influences the nature of adult education through UNICEF. Using examples from a specific case study in water and sanitation, the author describes adult education as well as raises issues and implications for the field. Central to the discussion is the degree to which education should be concerned with promotion of specific aims or provision of a neutral forum for critical examination of issues.

## ADULT EDUCATION: ITS MANY FACES IN UNICEF

Children are the primary beneficiaries of the work of the United Nations Children's Fund (UNICEF). However, to benefit children, UNICEF must work through adults. A major component of these programs is adult education -- through advocacy for children (public education), work with the child's environment (community education), and work with women both as mothers (health, nutrition, and home economics education) and as individuals whose own development contributes to both personal and social change (transformation). This paper describes adult education programs supported by UNICEF and examines implications and issues for adult education. An example will provide a framework for this discussion: the re-orientation of water and sanitation programmes away from a technical emphasis toward education of mothers and the community.

### Organizational Context

But first, this re-orientation will be placed in the context of a broader historical change in UNICEF and many other development programs away from ad-hoc provision of supplies toward building up the capacity of governments and people for self-reliance. In the 1970s in UNICEF, this shift toward capacity building was spelled out philosophically as the Basic Services strategy (UNICEF, undated). Basic Services emphasized community participation to gain access to resources to meet fundamental human needs at the grass-roots level. This strategy remained compatible with a later initiative supported by UNICEF and the World Health Organization (WHO) for Primary Health Care (PHC), the re-orientation of health services from a top-down to a bottom-up approach, with both articulation of needs and their satisfaction initiated by communities. Needs that could not be met by this level would be referred to the next highest level, and so on up the ladder. Based on the concept of social and financial equity, this strategy has required decentralization of resources, massive mobilization of communities, re-design of health service infrastructure to provide supportive supervision and technical assistance to primary care givers, and training of care givers at all levels, including the community.

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The concept of PHC, while all-embracing, proved difficult to implement for a variety of reasons. PHC called for massive social, economic, political and administrative changes in thinking and acting at all levels -- from influential decision makers who would "lose" some access to resources and services to villagers whose society and culture often fostered fatalism and dependence. In the 1980s, UNICEF initiated a Child Survival and Development Revolution (CSDR) by bringing the plight of children to the public eye in what would become an annual State of the World's Children Report that spelled out the problems of survival faced by children and that advocated simple, low-cost interventions meant to hasten the implementation of PHC. These interventions -- the use of growth charts for child monitoring, oral rehydration therapy, breastfeeding rather than bottle feeding, and immunization -- were seen as the tip of the PHC arrow. CSDR was welcomed by some as the key to success and attacked by others as an oversimplification of a complex problem and a reversion to the single-focus campaigns already judged by history as a mistake because they could not be sustained.

CSDR has been adjusted over time. A few key interventions, particularly control of diarrhoeal diseases and universal child immunization, are entry points for a range of related efforts. Over time, it became clear that these simple interventions could not work without developing the infrastructure in which they are based -- human, financial, technological, administrative and other resources. This led to a new look at how education could be used to promote CSDR, from the women in the villages addressed by programs to the various levels of people working in programs or playing a role in their development. It is also leading to a renewed interest in both formal and nonformal education.

The public launching of CSDR was able to turn around one of the key obstacles to PHC's success: political will. Political context is key to program design. This is perhaps most obvious in centrally planned economies where constraints of mobility and message are often offset by a commitment to social change. Successful CSDR interventions have been typically accompanied by effective use of media to capture the attention of decision makers who recognized for altruistic and/or political reasons that child welfare was a goal worth pursuing. The focus of educational efforts expanded from traditional emphasis in UNICEF-supported programs on the community to strategies for reaching opinion makers, calling into play communications and media specialists whose focus on delivering messages is sometimes regarded by educators as persuasion or advertising. Indeed, "social marketing" has become a prominent part of efforts for reaching people. Commercial marketing has been re-interpreted for social agencies in recent years (Kotler, 1975). It has surfaced in UNICEF (Elkamel, 1986) to aid program staff in promoting CSDR.

The term "social mobilization" is being used to designate the full range of educational, informational, and politically influential activities employed, from the community to the top leaders of a country, to achieve program goals. Social mobilization adjusts for UNICEF's prior bias toward community participation. While the latter is not excluded from its definition, there is an emphasis in social mobilization on social marketing, with lessons borrowed from efforts in the 1960s to promote family planning by reaching key national and religious leaders, politicians, media figures, social elites, and social organizations. Thus, education for social mobilization is both a little broader and a little narrower than previously interpreted. It is broader in that it is used for more than training staff or teaching mothers how to use Oral Rehydration Therapy. It is narrower in that its focus is more sharply defined in terms of promoting CSDR. Favin et. al. (1986) contrast these differences in a discussion of health education for UNICEF by comparing the "educational" approach --

which emphasizes empowerment of people, broad-based community development and nonformal education -- with the "promotional" approach utilizing social marketing principles.

## The Case Study: Water and Sanitation Programs

Water and sanitation programs illustrate the many faces of adult education in UNICEF. Water and sanitation programs are a marriage of two related, but very different, functions: providing usable water, recognized in most cases as a positive "good"; and installing sanitation systems to keep water and the environment clean, often not recognized as important or relevant by communities with habits of cleanliness that may even spread or facilitate disease.

Early assistance in water emphasized technology. Since water systems could seldom be installed without professional assistance, engineers and other technicians surveyed village sites, decided where systems would be installed and which ones were appropriate, installed them and left. Questions could be raised about the technology itself: its appropriateness, cost-effectiveness and "fit" with other national priorities such as whether people were being encouraged to stay in rural areas or migrate to cities. But leaving this aside, a host of other problems arose around the use of these systems because the community was seldom involved in their design. For example, women were not consulted on site selection even though they were usually responsible for gathering and storing water. Cultural factors were not taken into account, such as the social function of the local well, privacy needs of women, or the dual role played by water sources, i.e., for both drinking and washing oneself and clothing. Seldom was attention paid to who would maintain the pump, or to cautioning villagers against priming the pump with contaminated water.

The role of education in sanitation programs became clear much earlier because sanitation workers had been attempting to change these deeply ingrained habits for much longer. Stories abound of the sanitary latrines locked up and kept for display, or their use for other functions such as watering animals. Since many villagers do not understand things they cannot see such as germs, it became difficult to explain the role poor sanitation plays in health. Many times, the placement of a latrine within the home or close to it involved odors, flies or other disadvantages not experienced when defecation took place in fields or over streams. Privacy issues would also be raised since space in village homes is scarce and men may not mingle with women in matters of cleanliness and personal hygiene.

When CSDR was launched, some key leaders in water and sanitation already saw that education must play a stronger role: in helping villagers become involved in design decisions, in involving the community in aspects of latrine selection and water installation so that they would have a stake in their use, in training locally-selected men and/or women to maintain the pumps and use them without infecting the water, in training local "promoters," and in using the intervention as an entry point to teach mothers about the role of safe water in health and sanitation. CSDR made this role more apparent, and enhanced awareness of linkages between water/sanitation and other components of child welfare. Adult education played a public role in raising awareness and a community role as an entry point for developing self-reliance. Women were not only provided with information, but at times began to see their role in society differently -- a transformation since in many cases, women had seldom been consulted in the design of programs (Yansheng and Elmendorf, 1984). No where was this more evident than in male-dominated Moslem countries where it is difficult to even gather a group of women together for discussion. However, in most cases, this transformation was not the primary goal of learning; it occurred at times serendipitously as a byproduct of program development and the prodding of women staff who offered a different view of what women could accomplish.

UNICEF held a working meeting with key staff from its water and sanitation programs around the world to begin a process of re-orientation in focus away from the technical and toward the educational. Adult education was never mentioned as a discipline, although health education was discussed, primarily in terms of the need to redefine and operationalize it in CSDR. Health education has often been narrowly interpreted as giving information (often through print and traditional media) rather than as a dynamic process that emphasizes participation and involvement of both communities and individuals in health promotion, maintenance and restoration. Health educators have also been cut off from the kind of public promotional activity successfully used in CSDR.

The working group agreed that Green's definition of health education (1980) be adopted: "any combination of activities designed to facilitate voluntary adaptations of behavior conducive to health," be they focused on the individual, groups or the entire community. This definition includes activities that are both specifically educational and those that are promotional, as reported by Marsick (1985): empowerment of villagers in defining and solving their own health problems, enlisting the support of communities in all phases of program design, incentives and other support for new behavior, training of workers, and creation of demand through social marketing. The emphasis was clearly on individual behavioral change and support from the environment.

## IMPLICATIONS AND ISSUES

Water and sanitation programs involve adult learning at all levels since people must be helped to see themselves and their situation in a different light, identify and solve problems and acquire new information and skills to design or carry out programs. Sometimes this happens in a focused and formal mode, as for example, through workshops, seminars, training, classes or meetings organized expressly for the purpose of learning. Sometimes media are used to get a message across without any further educational follow-up, as for example, with radio or TV shows and "spots," posters, advertising or public talks. Sometimes it happens incidentally either through groups organized for some other purpose or through informal interaction with colleagues on field trips, social occasions, or work-related interactions. It might be noted here, however, that those involved in this adult learning (as either learners or educators) have not always seen themselves or these programs as adult education. Adult education in the developing world is often interpreted primarily as literacy instruction. The broader range of learning interactions that take place in the name of such change may not be seen as education at all, or if interpreted as such, are seen as communications or as part of the particular sector initiating change, such as health.

The Executive Director of UNICEF noted that education for water and sanitation should effect a "thinking revolution" -- helping women to see they can effect their children's survival and ultimately recognize they have control over their lives. However, the bottom line was still leverage to achieve specifically defined programmatic goals. Several dilemmas follow. First, there is a big leap between adopting new practices and shifting locus of control from external to internal forces. This goal requires more than promotion.

Second, the same dilemma emerges that has run through the broader organizational context: does education for CSDR mean focused promotion of certain end-products, or should it be a more dispassionate, critical attempt to consider various alternatives, irrespective of choices made about outcomes. The issues here are not only educational since the latter definition favors community development and empowerment. Favin et. al. (1986, p. 9), for example, note the case of a development worker in India whose use of a market game (comparison among participants of food purchased with money normally available to them) quickly led from malnutrition to a glaring example of poverty that would certainly lead to death: a worker whose earnings of $.60 per day had already led to two deaths of his children from kwashiorkor and a third from low birth weight. Politics were more germane than nutritional advice.

On an international level, this sensitive political question is even more complex since agencies such as UNICEF support government policies but do not determine them. Advocacy, social marketing, and other promotional efforts involve persuasion of elites as well as villagers. In this case, the goals are admirable: saving children. However, many admirable causes have led to complications because the effects were not fully considered. For example, emergency interventions have moved away from massive infusions of food, tents and other such visible supplies because they may displace locally marketable goods, encourage dependency on imports, and disrupt traditional family ties and social patterns. Even if one agrees with the goals, questions can also be raised as to the ethics of external influence. International agencies can foster an "idea revolution," but may not foster consideration of issues.

Learning design in many development projects is dominated by a behaviorist mode that emphasizes achievement of predetermined outcomes, often decided by a group external to those being assisted. There are exceptions, most notably in some PHC interventions because of the recognition that more is involved than providing workers and people with additional technical skills. PHC involves a change in the way in which both consumers and providers view their worlds. Consumers must see themselves as responsible for their own lives, while providers must see themselves as one with the community. Adult educators can, and at times do, assist in providing a different approach to learning, one that emphasizes some degree of reflection on the social and cultural norms in which health care is embedded. Those programs concerned first and foremost with community participation and/or with social transformation also examine the fundamental relationship among the powerful and the powerless as a step toward control of one's own life (Feurerstein, 1982; Were, undated). Adult educators are not in uniform agreement about the need to temper behavioral objectives with a forum for critical reflection of social norms and a means for personal and social transformation. Moreover, even when they take this perspective, there are not always mechanisms by which they can share their professional expert se. UNICEF, an agency that does not identify itself directly with adult education, illustrates the range of situations in which adult education takes place and provides a challenge to the profession to influence the nature of learning.

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# INDIA'S AGRICULTURAL EXTENSION DEVELOPMENT: THE MOVE TOWARD TOP-LEVEL MANAGEMENT TRAINING *

William M. Rivera[1]

## Abstract

In order to foster improved management of agricultural extension, the GOI instituted in 1985 a national program for senior-level training in agricultural extension management. This discussion traces this new initiative by the GOI and outlines a suggested curriculum intended to lead toward accomplishing the objectives of this program.

## OVERVIEW

India is the second most populous and the seventh largest country in the world. Its nearly 700 million people represent over a sixth of the world's population. Some 75 to 80 per cent of them live in villages (of which there are about 600,000) and agriculture is the main occupation. India lives in villages and agriculture occupies, and will continue to occupy, a crucial place in Indian economy.

The general approach, organizational responsibility, and delivery system of agricultural extension has evolved rapidly and radically in India. Following independence in 1947, the Government of India (GOI) initiated a single-line agricultural extension service which was discontinued with the introduction of the Community Development Program in 1952. Under the Community Development Program, village level workers (VLWs) were employed to provide a wide range of public services (such as health, family planning, etc.) although they were expected to devote some 80 per cent of their time to agriculture.

In the late 1950s the continuing expansion of the population, food shortages and unfavorable weather conditions highlighted the urgency to accelerate food production. As a result the Intensive Agricultural District Program (IADP) was developed by the GOI; as it quickly increased in area eventually covering some 28 districts, the Ministry of Agriculture's Directorate of Extension (DOE) recognized the need for training extension staff. In the early 1960s, three Extension Education Institutes were created.

Since the early 1960s, several development programs have been launched by the GOI through its Ministry of Agriculture to step up agricultural and allied production, e.g.: (a) the Intensive Agricultural Area Program (IAAP) in 1964/65, (b) the High-Yielding Varieties Program (HYVP) in 1966/67, (c) the Small Farmers Development Agency (SFDA) in 1970/71. Parallel to these development programs--as early as 1966, the DOE (Directorate of Extension) designated short-term staff training courses in agriculture for senior officers of these and other training projects. These courses were organized in association with the state agricultural universities (SAUs), research institutes and colleges.

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*The views and opinions expressed in this chapter do not necessarily reflect the position or policy of FAO, and no official endorsement should be inferred.

Thus, before the introduction of the Training and Visit (T&V) system, beginning in 1974, the DOE in the Ministry of Agriculture and Rural Development had for over a decade been developing training courses for different levels of agricultural development staff. With the introduction of the T&V System, extension management training was intensified for grassroots and middle-level staff. More recently, this priority has been extended to increase training for senior-level management.

India's efforts to train senior level officers involved with agricultural extension's allocations and direction have been underway since 1980/81. Workshops have been held usually once or twice a year since that time at the national and regional levels regarding the operations of the T&V system. Gradually the need for such training has been accepted as a priority.

In 1985 a national program was conceived to advance the management competencies of senior-level officials. An entity known as MANAGE was created in January 1986 by the GOI with assistance from the World Bank. While a fledgling effort on the part of the GOI, this move is notable for several reasons. It represents major leadership on the part of India in this domain, both nationally and internationally. It underlines the importance of top officers understanding the function, role, and value of agricultural (production) extension services. Moreover, it implies that while there exist certain general principles of management, these must be tailored to agricultural extension practices, and further that, in India's case, the agricultural extension practices to which management principles must be fitted apply especially and specifically to the Training and Visit system.

This new national agricultural extension management training program has resulted in two international assistance efforts, both of which took place in March/April 1986. The FAO sent a mission to assist in the development of a basic curriculum for faculty involved in agricultural extension management training. At the same time the World Bank contracted with an Indian national to undertake an assessment of the need for management training in agricultural extension management.

## THE T&V SYSTEM AND ITS EVOLVING MANAGEMENT PRIORITIES

At the center of any contemporary discussion of agricultural extension and extension management training needs in India is the Training and Visit (T&V) system, a near nationwide development in India's federated republic of 23 states. There are numerous detailed treatments of the system (e.g., Bonor & Harrison, 1977; Benor & Baxter, 1984; and Benor, Harrison & Baxter, 1984). However, some summary comments may be in order.

The T&V system sets out to create extension services which consist of regular training of agents by subject matter specialists and of regular visits by agents to farmers. It is not so much a new idea--indeed, the basics for the system already existed in India's administrative arrangements under the Community Development Program of the 1950s and 60s--but it is an idea which points to the importance of a strongly hierarchical scheme which regularizes the training of agents and their visits to farmers.

Grassroots VLWs are mandated to provide periodic technical information to farmers. For middle-level personnel the DOE has developed a number of Extension Education Institutes (EEIs), as already mentioned, and these are being utilized for imparting subject matter training as well as extension and management training for the SMS and other middle-level personnel. T&V training for higher level officials in the agricultural extension network has been limited to monthly (zonal) and seasonal workshops on technical matters.

The increased magnitude of the T&V organization in India has affected the extent of management training needs. A significant progress in 1976 and 1977 (in India) was that the creation of the T&V system was extended beyond relatively small areas, in order to cover entire states. It is also important to note that the organizational pattern usually cited for T&V refers to the State Department of Agriculture at the top of the administrative hierarchy as a single (unspecified) group of managers.

The State Departments of Agriculture incorporate two major arms in their administration: a budgetary arm and an implementation arm. The budget arm includes the APC (Agricultural Production Commissioner), Secretary of Agriculture, and Additional Secretary of Agriculture--who essentially administer financial control of program targets. The implementation arm includes the Director of Agriculture, Additional Director, Joint Commissioners, Assistant Directors, and Deputy Directors (those who translate policy guidelines into program thrusts). The implementation arm may be further divided, with Directors and Additional Directors considered senior-level personnel and Joint, Assistant and Deputy Directors as middle-level personnel. This distinction between the budget and implementation arms of the State Departments of Agriculture has important implications for the design of agricultural extension management curriculum.

## CORE COURSES FOR SENIOR-LEVEL AGRICULTURAL EXTENSION MANAGEMENT

In designing curriculum for senior-level management involved with agricultural extension the unique character of agricultural system presents the student with distinct organizational structures, procedures and mechanisms for implementing the agricultural extension function. It is important to recognize the distinction among as well as within systems, for these will affect the managerial theories, principles and practices to be employed in each system.

For example: the T&V system is first of all strictly an agricultural extension system, i.e. its sole purpose is to provide extension services for agricultural production purposes. The U. S. "Land Grant" Cooperative Extension System is different in that, while its sole purpose is extension, its services cover several main areas: agriculture, home economics, youth development, and community resource development. The Taiwanese "farm information dissemination system" is distinct in that its programs are supervised and carried out by Provincial Government and Farmers' Association. The management issues in linking research and extension, for instance, will differ for each of these examples of extension systems--even though general management principles remain the same.

In order to develop an effective core curriculum for senior-level officials in India responsible for agricultural extension management, the two levels of senior officials within the State Departments of Agriculture must be differentiated: Those in the policy and budget allocation branch (Agricultural Production Commissioners, Secretaries of Agriculture, and Additional Secretaries) and secondly the officials in the implementation branch (Directors of Agriculture, Additional Directors, Joint Directors, etc.). This division of rank and responsibility requires that core courses be developed and designated as to whether they are applicable to policy branch officials, implementation branch officials, or both.

The FAO team sent in 1986 initially organized the curriculum for Agricultural Extension Management into five major categories and then developed a total of ten recommended seminar courses. The categories and courses were arranged as follows:

### PRELIMINARY AGRICULTURAL EXTENSION MANAGEMENT CURRICULUM

I. Foundations
    1) The Foundation Course
II. (Selected) Basic Management Functions
    2) Planning (A)
    3) Organizing (B)
    4) Supervising (B)

- III. Communication
  - 5) Organizational Communications (A&B)
  - 6) Communication Skills for Managers (B)
  - 7) Communication Planning & Strategies (A&B)
- IV. Staff Development and Training
  - 8) Training for Staff Development (A&B)
  - 9) Communications Skills for Trainers (B)
- V. Monitoring, Evaluation and Utilization (A&B)
  - 10) Monitoring, Evaluation & Utilization (A&B)

The Foundation Course is intended to introduce the subject of agricultural extension management, to provide a brief overview of each of the courses and thereby assist in guiding officials in their choices of follow-up courses. Each course is designated by the letters "A" and "B" (note after each of the above course titles) to refer to whether the course is meant to be directed toward budget branch officials (A) or implementation branch officials (B) or both (A&B), but these designations are meant only to be suggestive.

## SUMMARY

In order to foster improved management of agricultural extension, in 1985 the GOI instituted a national program for senior-level training in agricultural extension management. This discussion traces this new initiative by the GOI and outlines a suggested curriculum intended to lead toward accomplishing the objectives of this program.

The current intervention to provide systematic management training in agricultural extension management for senior-level officials in India is a priority that has been held in abeyance while the T&V system became operational; it now appears overdue. The experience of India in this domain should be kept in perspective, for it promises to provide insights and guidance to their countries and donor organizations concerned with top-level management of agricultural extension systems.

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# CHARACTERISTICS OF SABERKAS' LEADERS AT THE DISTRICT LEVEL IN THE STATE OF SARAWAK, MALAYSIA

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## Abstract

This study investigated the leadership behavior of the leaders of SABERKAS in Sarawak, Malaysia. Leadership style possessed by these leaders, their background and training needs were also examined. The researchers further determined how leadership behavior and leadership style correlated with demographic variables.

This study was descriptive research of a survey type. Both descriptive and correlational methods were used in the analysis of data. The frame of the population was based on a list of 305 members identified in 26 District Committees of which a sample of 211 was randomly selected. Of these 211 possible respondents, 185 (87.7 percent) returned the questionnaires.

## RESEARCH QUESTION

The Ministry of Culture, Youth and Sports of Malaysia has, since its inception, encouraged youth to form organizations at all levels in urban or rural areas. Among the ordinary youth organizations is the Pertubuhan Belia Kebangsaan Bersatu Sarawak (literally translated as the Sarawak National Youth Organization), the largest youth organization in the state of Sarawak. This organization is more popularly known as SABERKAS. The word "saberkas" can simply be translated as bundle, but its metaphor is strength. SABERKAS membership has been open to all Malaysian youths regardless of race, belief, class or status and was formed on July 22, 1972 in the interest of multi-racial unity and the infusion of national pride. At present, there are about 800 SABERKAS units throughout the state with a membership of about 70,000.

### Organizational Administration

There are three levels of organization within SABERKAS; state, district, and unit. The state committee is the backbone and has the authority to administer the state SABERKAS. The 27-member state committee is lead by a president, and members are elected and/or appointed at the biannual general meeting. At the District level, the level with which this study is most concerned, is a chairperson, one vice chairperson, one secretary, one assistant secretary, one treasurer, and from six to eight lay members.

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There are currently 26 District committees functioning in the state of Sarawak (SABERKAS, 1972).

The unit committee operates at the local level. At this level the committee consists of one chairperson, one vice chairperson, one secretary, one treasurer, and from six to eight lay members.

### Statement of the Problem

In this study, the researchers wished to examine the leadership of SABERKAS at the district level. One must remember the district leaders are the representatives of unit leaders. In other words, studying the district leaders can also be interpreted as studying the leaders in the units as well. Although the formation of SABERKAS occurred on July 22, 1972, there is hardly anything known about its leaders.

Therefore, the main purpose of the study (Othman, 1986) was to investigate the leadership behavior of the leaders of SABERKAS in Sarawak, Malaysia at the District level. The leadership behavior was examined under nine dimensions: initiation, membership, domination, representation, communication, organization, recognition, integration, and production and their relatedness to other variables. Leadership style (i.e. Influenced, Consultative, Participative, or Withdrawal) possessed by these leaders, their background and training needs were also examined. The study further explored how leadership behavior and leadership style correlated with selected demographic variables.

## METHODOLOGY

This study was descriptive research of a survey type. Both descriptive and correlational methods were used in the final analysis of data. As descriptive research, this study described the leadership behavior and style, and the background of SABERKAS leaders at the district level. As a correlational study, the researchers wanted to determine the relationship between the nine dimensions of leadership behavior and the selected demographic variables. At the same time, the researchers anticipated the discovery of selected demographic characteristics correlating with leadership styles.

### Population and Sample Size

The frame of the population was based on a list of 305 members identified in the 26 District Committees. This list was obtained from SABERKAS headquarters. Frame and selection errors were controlled by using accurate and current lists. By using Cochran's (1977) formula for determining sample size (with a confidence level of 95 percent, an estimated standard deviation of 1.56 and a degree of precision of 2.2) 211 people were randomly selected for the study. Out of this sample, 185 (87.7 percent) answered and returned the questionnaires.

### Instrument

The major portion of the questionnaire encompassed quantifying leadership behavior which was derived form The Ohio State University's Leader Behavior Description Questionnaire (Hemphill, 1957). Thus, measurement error would be avoided by using a valid and reliable questionnaire. The other sections of the questionnaire were composed of leadership style (Bothwell, 1983), demographic and other questions concerning leadership training and needs of the leaders.

### Procedures

The sections of the questionnaire were tested for content validity by researchers in the Department of Agricultural Education at The Ohio State University and the Center for Extension and Continuing Education of the Universiti Pertanian Malaysia. Field testing was also done at the Universiti Pertanian Malaysia.

Personal introductions to the questionnaire were accomplished through a careful schedule arranged by letters written to each respondent in the 26 districts. The letter informed the respondent of the arrival date of one of the researchers, the purpose of the study, and the importance of the study. One of the researchers spent one night at every district headquarters. This enabled the researcher to meet the respondents from that district. During the meeting, the researcher described the research and answered related questions. After all questions were answered the researcher handed each respondent an envelope. Every envelope contained a questionnaire and a letter from SABERKAS headquarters together with a stamped self-addressed envelope to be returned to the researchers. Questionnaires were mailed to non-respondents but unfortunately no responses were received from this second attempt and due to the exhaustion of budget and time, this procedure had to be abandoned.

## FINDINGS

### Demographic Variables

Based on our data analysis (SPSSX, 1983), SABERKAS' leaders at the District level were described as follows:

Age: The age ranged from below 21 to above 45 years of age with almost 50 percent of the respondents being between the ages of 31 and 40 years.

Gender: Almost all were male (88.6 percent).

Marital Status: Approximately 77 percent of the respondents were married.

Occupation: A large proportion of the respondents were government employees (66.2 percent). About 30 percent were involved in farming and/or fishing.

Educational Level: Almost 75 percent had between 6 to 11 years of education.

Length of Membership: Slightly over 52 percent had been with the organization between 7 to 14 years.

Affiliation with Other Organizations: About 58 percent of the respondents were involved in other organizations besides SABERKAS.

Participation in Leadership Training: Slightly over one-half of the respondents had attended some form of leadership training.

Involvement of Relatives in Leadership Activities: Fifty-five percent of the respondents indicated that their brothers or sisters were involved in leadership activities.

Position in the District Committee: Thirty-eight percent were committee members, 19 percent were assistant secretaries, 15 percent were vice chairpersons, 11 percent were secretaries, 10 percent were chairpersons, and 7 percent were treasurers. Most of the respondents were chairpersons of their unit committees.

### Dimensions of Leadership

According to the responses obtained from the returned questionnaire, the leaders possessed all of the nine dimensions of leadership behavior identified for the study. Out of the nine dimensions, the dimension of Communication was perceived as the highest with a mean of 4.5 (5 being the highest), followed by the dimensions of Domination and Membership with means of 4.29 and 4.26 respectively.

### Leadership Style

The leadership style possessed by the leaders of SABERKAS at the district level varied from influenced to withdrawal. Forty-five percent of the respondents declared that they practiced a consultative style of leadership. One-quarter of the respondents were participative in their leadership style while 16 percent used the influenced style over their followers.

Leadership Competence

The leadership competence of SABERKAS leaders at the district level varied from "excellent" to "needs lots of improvement." While 37 percent of the respondents believed that they were satisfactory in their leadership performance, 39 percent stated they either needed some or lots of improvement to increase their leadership competence.

Leadership Training

A majority (81 percent) of the respondents agreed that youth leaders should be given leadership training. They suggested that besides basic leadership training, the leaders should also be taught how to manage their groups. In terms of methods of training, they preferred short courses/training, workshops and seminars.

Relationship Among Nine Dimensions of Leadership Behavior

Pearson product moment correlation coefficients indicated moderate to substantial positive relationships among the nine dimensions of leadership behavior. The highest correlation was found between the dimensions of communication and membership, and between organization and production dimensions. The lowest correlation was indicated between the dimensions of integration and representation.

Relationship Between Nine Dimensions of Leadership Behavior and Demographic Variables

Low to negligible relationships were found between the nine dimensions of leadership behavior and demographic variables. The highest positive relationship existed between the dimension of initiation and educational level.

Relationship Between Leadership Style and Demographic Variables

Correlation magnitudes were not above a low positive or low negative relationship between leadership style and selected demographic variables. For example, the highest relationship noted was a low positive relationship between leadership style and educational level.

## CONCLUSIONS

The main purpose of the study was to determine the leadership behavior of SABERKAS leaders at the district level. According to the responses obtained from the returned questionnaire, the leaders possessed all of the nine dimensions of leadership behavior identified for the study with the dimension of Communication as highest with a mean of 4.5.

The leadership style possessed by the leaders of SABERKAS at the District level though varied, mainly focused on the Consultative style. In other words, the respondents were more democratic rather than authoritative in their style of leadership.

A majority of the leaders of SABERKAS at the District level were male between 31 and 40 years of age, married and had between six to eleven years of education. They have been in SABERKAS between 7 to 14 years or since SABERKAS was formed. More than one-half of the District leaders were involved in other organizations and had participated in leadership training. Most of the respondents were chairpersons at the unit level.

In the range of "excellent" to "needs lots of improvement" the leadership competence of the District leaders fell in the middle. They were mostly satisfied with their leadership competence.

A great majority (81 percent) of the respondents agreed that youth leaders should be given leadership training. In terms of methods of training, short courses/ training, workshops and seminars were most desired. There were moderate to substantial relationships generated among the nine dimensions of leadership behavior, in other words one dimension of leadership behavior was a good indicator of one's performance in the other dimensions.

Low and negligible correlations existed between the nine dimensions of leadership behavior and demographic variables. This was also the case for the relationship between leadership style and selected demographic characteristics.

## IMPLICATIONS

Implications are that SABERKAS leaders are mostly using one style of leadership to the exclusion of others thus implying less flexibility. More information on leadership style and appropriate use of these styles needs to be conveyed. With 48 percent indicating a need for some or lots of improvement in leadership competence the implication given by SABERKAS leaders is for more and improved leader training. The method of selection for training was also voiced by many leaders as a problem. Consistency and equality in selection needs to be practiced.

Because farming was one of the major occupations of the leaders of SABERKAS, extension would do well to use these leaders and their influence when initiating new programs in the rural areas. The recommendation is also made that a better and more complete study on leadership behavior of SABERKAS would be useful, especially if all of the leaders at all levels were studied. Therefore, replication of this study on all leaders is deemed essential to determine the leadership behavior of the leaders of SABERKAS.

The high reliability of the instrument on leadership behavior implies that the instrument can be used to study leadership behavior of leaders of other youth organizations.

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# PUBLIC AND PRIVATE SECTOR EXTENSION IN AGRICULTURAL DEVELOPMENT

L. Van Crowder

## Abstract

Based on the assumption that agricultural technologies were available and the deficiency was in their dissemination and adoption, U. S. agricultural development efforts have focused on establishing public sector extension services for farmers in developing countries. Evaluations of government extension services have found them to be largely ineffective, especially in helping small farmers. Private sector extension is increasingly being proposed as an alternative approach. This paper examines various examples of private sector extension in developing countries and discusses the social and economic implications of increased privatization of extension.

## THE PUBLIC EXTENSION MODEL

Agricultural extension, as traditionally organized and practiced in most developing countries, is associated with an information delivery/technology transfer model of public sector assistance to farmers. As such, it represents a social investment in improved agricultural production and rural development and implies a generalization of benefits within a country's population.

Public extension in developing countries has been described as "a modified model of the colonial extension system" (Awa, 1981) and "a partial transplant" (Whyte, 1981) of the U. S. land-grant university extension system. Drawing on the U. S. experience and diffusion of innovations theory, the extensionist approach has been a major component of U. S. agricultural development programs for 40 years.

Despite widespread acceptance of public extension as the predominant method of agricultural assistance to farmers, its performance in increasing agricultural productivity and improving rural conditions has been poor (Rice, 1971; Jiggins, 1978; Moris, 1981; and Orvile, 1981). Perhaps the most frequently heard criticism of government extension is the progressive or elite farmer bias. Chambers (1974, p. 58) says "There is overwhelming evidence from all over the world that extension benefits go mainly to those who are already more prosperous."

Citing examples from developing countries of the rising costs of government extension, Woods (1983, p. 16) claims that "a large and growing volume of literature questions the impact, hence the justification, of 'orthodox' agricultural extension services." The high costs and limited effectiveness of extension, coupled with generally unsuccessful reform attempts, has led to the suggestion "to abandon the assumption that agricultural extension

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is a government responsibility and permit the intrusion of capitalist enterprise" (Hulme, 1983, pp. 69-70).

Recently, the U. S. Agency for International Development (AID) issued a policy statement that "greater reliance on private enterprise in third world development is essential to the effective and efficient accomplishment of AID's central objective." Noting that "many agribusiness activities (e.g. marketing, transport, storage, processing, credit provision, and production of inputs such as seeds and fertilizer) have been performed by public bodies in a number of LDCs [less developed countries]," the policy paper argues that performance of these functions by private enterprises "should improve efficiency" since "private enterprise is the engine that makes growth occur most quickly" (AID Policy Paper, 1982, p. 6).

A trend toward "privatization" of extension services is evident in many developing countries, a direction clearly encouraged and supported by AID policy. While it is unlikely that national governments will completely abrogate extension responsibilities, the implications of increased privatization of extension deserve consideration.

## PRIVATE SECTOR EXTENSION

Private extension activities in developing countries have gained considerable importance during the past decade. Extension-type functions are carried out by a diversity of private enterprises ranging from agribusiness corporations to mixed public/private companies (or parastatals) operating on commercial principles to firms that import and distribute agricultural inputs.

A common feature of agribusiness operations with growers of high-value cash crops like coffee, tea, tobacco, and cacao is contract farming extension. As part of the contract, and in the interest of maintaining high yields and a constant supply of quality products, corporations often provide a "package" of farmer services including seeds, fertilizers, pesticides, mechanical services, and extension visits by company technicians to ensure that cultivation specifications are followed. Farmers are charged a fee for these services, deducted at harvest time, and may pay a price penalty if production quotas are not met.

Hulme (1983) offers examples of private agencies in Papua New Guinea providing extension services to cacao and coffee growers. Here, as a condition of national development bank loans, producer groups employ the technical services of bank-approved private agricultural management agencies. Fees for the services are initially paid out of the loans, but the aim is to eventually pay from farmers' earnings. As an incentive to provide good services, the fees agencies receive are linked to farmers' profits.

Combining technical assistance with credit is not a new approach, but in the case of Papua New Guinea, failure of government extension to provide effective advisory services led to its replacement with private extension. An unanswered question, however, is whether the farmers involved are a select group who have the prerequisite resources to qualify for bank loans.

As in developed countries, farm store owners and agrichemical vendors can play an important role in developing countries by providing farmers with agricultural inputs and, in some cases, technical advice. Stavis (1979, pp. 80-81) says that government extension should reinforce and take advantage of the "spontaneous extension process" of which supply merchants are a part. He writes, "How to utilize merchants is a particular challenge. The interests of farmers and merchants do not coincide completely, but merchants often provide information to farmers about input supplies and product markets."

A relevant issue is whether the relationship between input vendors and farmers, especially illiterate small farmers, is one of symbiosis or exploitation. The conventional wisdom of many farmers is that agrichemical merchants are untrustworthy sources of technical advice because they are primarily motivated by profit and more interested in selling costly products in large quantities, rather than in helping farmers. A survey in Bolivia found that agrichemical vendors were significantly more important than government extension agents in farmers' decisions to use improved practices. A conclusion of this study was that in the absence of effective government extension, farmers had little choice but to turn to merchants for information about agricultural inputs (Crowder and Delaine, 1980).

Consistent with its private enterprise policy, AID is currently supporting private extension efforts in Ecuador through the Rural Technology Transfer System (RTTS) project. In the Quevedo region, for example, an attempt is underway to use an association of large commercial producers of short-cycle crops (maize, grain sorghum, and soybeans) as an "extension conduit" to small farmers for integrated pest management (IPM) technologies.

The rationale for a private sector approach is that successful IPM requires area-wide efforts and large farmers "will adopt this new technology faster than small farmers" and, in order to avoid insect reinfestation in their own fields, will have "a self-interest in the small farmer adopting the technology" (RTTS Subproject Paper, 1985). Past experience indicates, however, that the production interests and technological needs of large and small farmers seldom coincide, which raises questions about the basis for this attempt to transfer technology to small farmers through an association of large farmers.

A study recently commissioned by the AID mission in Ecuador recommends that extension responsibilities increasingly be shifted from the public sector to the private sector (AID/Ecuador, 1986). Here and in other developing countries, national policies and international donor initiatives are supporting an expanded private sector role in agricultural development, including privatization of extension services. This may lead to increased agricultural production of commercialized crops, but it does not necessarily contribute to improved rural conditions. It is unlikely that the social goals of rural development (e.g. reduced poverty, increased employment, improved health and nutrition) are of primary concern to private commercial enterprises interested in maximizing profits. Instead of reducing rural inequities, private sector extension may reinforce or actually increase social and economic stratification among farmers.

## OBSERVATIONS AND IMPLICATIONS

Commonly, particular regions of a developing country receive more attention from both public and private extension systems. Even within regions, services to farmers may be unevenly distributed with "the better educated who have personal capital, access to land, and may already be established in other business activities" receiving the bulk of services (Hulme, 1983, p. 75).

Private extension agencies are unlikely to operate in regions and with farmers and crops, or make investments in rural infrastructure, that don't allow rather immediate profits. In most cases, this excludes small, subsistence farmers.

Geographic isolation and subsistence mode of production also limit small farmers' access to agricultural inputs. Farm stores are usually located in provincial capitals or the larger towns of a region, and agrichemical vendors have little financial incentive to provide inputs and services to subsistence farmers who largely operate outside the market economy and live in remote areas.

In private contract extension, the beneficiaries are frequently larger, more prosperous farmers, whereas smaller farmers often become indebted for company services and may suffer the loss of their lands. Discussing contract farming by the Del Monte Corporation in Bajio Valley, Mexico, Burbach and Flynn (1980, pp. 186-187) state that it "leads to an increasing concentration of wealth among the valley's larger growers... while the ejidatarios or small producers are increasingly marginalized and often forced out of production."

Despite mandates to help limited-resource, small-scale farmers, government extension demonstrates a bias towards areas where cash crops, especially export crops, are grown and a tendency to favor farmers with better access to productive resources. Small farmers who do succeed in using government extension services, frequently do so by establishing "patron-client" relationships with extension agents. In Ecuador, for example, agents often sharecrop with small farmers who provide land and labor in exchange for seeds, fertilizer, and other inputs, as well as technical advice, from agents who receive part of the harvest.

Development planners often picture public and private extension systems as having complementary roles in agricultural development. For example, Ruttan (1982) describes the public and private sectors as having a partnership in agricultural development and contends that a relatively small share of new technology developed by the public sector is transferred to users without the participation of private enterprises. An argument can be made, however, that private commercial enterprises appropriate the benefits of public investment in agricultural technology for particularistic ends (i.e. profit) and that the recipients or users of privately transferred technology are largely special interest, more privileged groups of farmers. Under these conditions, technology becomes more a merchandise and less a public good.

Control over government agricultural services by commodity-based special interest groups who dominate regional economic and political affairs (what de Janvry, 1981, calls "Balkanization" of the public sector) results in the alignment of public services with the specific commercial interests of the commodity groups. Whether public extension is "captured" by affluent groups or is purposively aimed at a clientele that has privileged control over productive resources and access to markets and good infrastructure, the result may be the same: establishment of a capitalized elite and further disenfranchisement of already disadvantaged segments of rural society (e.g. seasonal farm workers and near-landless subsistence farmers).

Paradoxically, government extension services may become "more and more marginal once commercialized farming takes root and a complex of private agricultural support agencies come into full operation" (Moris, 1983, p. 28). It is not uncommon for the best trained, more capable government extension workers to be recruited by private agencies which pay higher salaries, offer attractive professional incentives, and provide good support facilities. A possible outcome is a passive or even superfluous public extension system as its services are replaced by a more active private system, or as wealthy commodity producer associations organize their own specialized services.

While increased privatization of extension may be an integral part of the commercialization of agriculture, it can, by weakening public extension services, reduce the ability of government to plan and implement an overall development strategy. Takeover of public extension functions by private agencies can result in a less influential government role in mobilizing the supply and type of technical assistance and in determining potential recipients.

With significant shifts in international donor support from public sector to private sector extension, government services may become even more ineffective than at present in responding to basic agricultural and rural development needs. As a consequence, it may become progressively more difficult for government to integrate extension services within the broader goals of community development.

Privatization of extension suggests an opportunity for public extension to redirect its services towards disadvantaged areas and poor subsistence farmers. The inequities implied in increased private sector extension may necessitate an expanded public sector commitment to meeting the basic needs of the already underprivileged rural poor. Past experience and present practice indicate that reorienting government extension to this task will not be easily achieved. Failure to do so, however, may lead to further social and economic inequities in the countryside.

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# A FACTOR ANALYTIC STUDY OF AN ADULT CLASSROOM ENVIRONMENT SCALE

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## ABSTRACT

A factor analysis was performed on 449 responses to the Adult Classroom Environment Scale. All but 15 of the original 49 items loaded clearly on one of five factors. The factor analysis only partially supported the original seven dimensions on which the ACES was based. A revision of the ACES, minus the 15 ambiguous items, should be used to further validate this instrument.

## Objectives

The purpose of this research was to factor analyze the Adult Classroom Environment Scale developed by Darkenwald and Valentine (1986), as an attempt to empirically support its conceptual underpinnings.

## Background/Research Question

Darkenwald and Valentine (1986) developed the Adult Classroom Environment Scale (ACES) in an attempt to obtain a valid instrument for use in classroom environment research with adult populations. Beginning with interviews of adult students and educators, a research team generated 159 items that pertained to adult classroom environments. The list was pared further to 89 items that were inductively classified into seven dimensions. After administering the 89 items to 220 subjects, an item-analysis procedure was used to reduce the item pool to a final total of 49, seven in each of the following dimensions.

1. Affiliation, defined as student interaction and cohesion;
2. Teacher Support, defined as sensitivity and encouragement;
3. Task Orientation, defined as focus and accomplishment;
4. Personal Goal Attainment, defined as relevance and flexibility;
5. Organization and Clarity, defined simply as organization and clarity;
6. Student Influence, defined as collaborative planning and teacher non-authoritarianism;
7. Involvement, defined as student attentiveness, participation, and satisfaction. (Darkenwald & Valentine, 1986)

No factor analysis was conducted.

The current research question was "Would a factor analysis of responses from a similar sample support the seven dimensions?"

There are three forms of the test: the Student Ideal, Student Real, and Teacher Real. Each form differs from the other only in the directions and tense form of the items. The Ideal form is meant to elicit opinions about students' "ideal" classrooms, while the Real forms are esentially student or teacher evaluations of real classes.

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## Method/Data Source

Subjects were given the Student Ideal form of the ACES, and asked to fill it out completely. The scale consisted of the 49 items, and additional questions regarding gender, age, and highest educational credential received. There were 449 fully completed protocols.

Data were collected from five different educational settings:
1. Graduate classes in education in a large state university, n=90;
2. Off-campus (army base) graduate class in education, n=39;
3. Health sciences campus classes in nursing and radiologic technology, n=84;
4. Undergraduate classes at a state college, n=114;
5. Government service technical training school, n=122.

A maximum likelihood factor analysis was performed on the 49 items, using the squared multiple correlations of each item with all the other items as the prior communality estimates. The rotation chosen was PROMAX, which produces an orthogonal varimax prerotation followed by an oblique rotation. Solutions with three to eight factors were evaluated for clarity of theoretical interpretation. Because the oblique rotation provided no further theoretical clarity, the orthogonal rotation was chosen for analysis.

## Results/Conclusions

The distribution of ages and levels of schooling corresponded closely with Darkenwald and Valentine's (1986) respondents, which they indicated were similar in demographic composition to adult education participants generally. Table 1 is a comparison of the two samples of respondents.

Table 1
Sample Comparisons on Age, Gender, and Educational Attainment

| Age | D. and V. | A. and L. |
|---|---|---|
| 26 | 32.3% | 32.1% |
| 26 - 33 | 32.8% | 27.7% |
| 34 - 72 | 34.9%*<br>* (3.3% of this group were above age 56.) | 40.3%#<br># (1.2% of this group were above age 56.) |
| Gender | | |
| Male | 39.3% | 50.3% |
| Female | 60.7% | 49.7% |
| Education | | |
| No Credential | 3.8% | 0.5% |
| High School Diploma | 46.8% | 44.0% |
| Associate degree | 8.9% | 14.4% |
| Bachelor's degree | 31.4% | 22.5% |
| Graduate degree | 9.1% | 18.6% |

Of the factor solutions explored, the five-factor solution yielded the clearest theoretical interpretation. Total variance accounted for by the five factors was 38.5%. Fifteen of the original 49 items failed to load clearly on any one of the five factors. Darkenwald and Valentine's proposed seven dimensions were only partially supported.

The criteria used to determine whether or not an item loaded clearly were: a loading of .39 or higher on one factor, with no loadings within .10 on the other factors; and no loadings higher than .40 on any other factors. Table 2 contains items and their factor loadings.

Table 2
Factors and Item Loadings

| Factor 1 | | Factor 2 | | Factor 3 | | Factor 4 | | Factor 5 | |
|---|---|---|---|---|---|---|---|---|---|
| "Teacher Activities" | | "Student Affiliation" | | "Student Attitudes" | | "Teacher Domination" | | "Student Prerogative" | |
| 3 | .54 | 8 | .46 * | 4 | -.56 * | 10 | .59 * | 1 | .54 |
| 9 | .55* | 17 | .43 | 5 | -.42 | 12 | .51 | 35 | .46 * |
| 14 | .42 | 31 | .54 * | 6 | -.52 * | 28 | .46 | 37 | .71 * |
| 16 | -.41 | 33 | .54 * | 11 | .53 * | 39 | .53 * | 43 | .44* |
| 22 | .68 * | 45 | .47 | 18 | -.47 | 49 | .52 * | | |
| 23 | .64 * | 46 | .50 | 20 | .50* | | | | |
| 26 | .66 * | | | | | | | | |
| 27 | .61 * | | | | | | | | |
| 30 | -.53 * | | | | | | | | |
| 38 | -.40 | | | | | | | | |
| 40 | .68 * | | | | | | | | |
| 41 | .63 * | | | | | | | | |
| 48 | .44 | | | | | | | | |

(Items with asterisks following their loadings also achieved final communality estimates of at least .35.)

The first factor contains 13 items which loaded above .39, and had loadings ranging from .008 to .33 on the other factors. This factor has been called "Teacher Activities" because it encompasses all but three items of Darkenwald and Valentine's (1986) dimensions of "Teacher Support" and "Organization and Clarity." The "Teacher Support" dimension contains items such as:

> "The teacher makes every effort to help students succeed."
> "The teacher encourages students to do their best."

The "Organization and Clarity" dimension includes items such as:

> "The teacher comes to class prepared."
> "The subject matter is adequately covered."

Eight of the items on this first factor achieved a final communality estimate of .35 or greater.

The second factor contains 6 items which loaded above .43, and had loadings ranging from .01 to .39 on the other factors. Because this factor exactly parallels Darkenwald and Valentine's (1986) dimension of "Affiliation," it has been labeled "Student Affiliation." This factor contains items such as:

> "The students in the class work well together."
> "Many friendships have developed in the class."

Three of the items on the second factor achieved a final communality estimate of .35 or greater.

Factor three contains 6 items loading above .42, with loadings on the other factors ranging from .01 to .39. This factor includes the items from the "Involvement" dimension which relate to student enjoyment of the class, along with the items from "Task Orientation" concerning whether or not the teacher and students discuss things unrelated to course content, and one item from "Personal Goal Attainment" on the relevancy of the class to the lives of the students. Consequently, this factor is difficult to name, but has been called "Student Attitudes." Four of the items loading on this factor achieved a final communality estimate of .35 or greater.

The fourth factor contains 5 items loading at .45 or greater, with a range of loadings on other factors from .002 to .19. The items loading on this factor are very clearly related to teacher domination of the class, and thus the factor has been called "Teacher Domination." It contains 4 items from the dimension of "Student Influence" and one item from "Personal Goal Attainment." Three of the items acieved a final communality estimate of .35 or greater.

The final factor contains 4 items loading above .43, with loadings on the other factors ranging from .04 to .34. This factor has been called "Student Prerogative" since items included deal with what the students want to learn, learning at their own pace, and student participation in setting the course objectives, topics and requirements. The dimensions of "Personal Goal Attainment" and "Student Influence" are both partially represnted in this factor. Three of the items loading on this factor achieved a final communality estimate of at least .35.

## Implications for Practice

The Adult Classroom Environment Scale purports to measure seven dimensions of adult classroom environments. The results of the factor analysis only partially support the conceptual underpinnings of the ACES. The instrument needs to be revised in light of the findings and tested again before anything but cautious interpretations are made of its use.

The development of reliable, valid instruments is important to any field of educational research, and factor analysis contributes to this process. In the area of adult education environments it is critical, since there have not previously been any valid, reliable instruments for environmental assessment.

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# THE SCOPE AND EVOLUTION OF HERMENEUTICS AND ITS CHALLENGE TO LIFELONG LEARNING PROFESSIONALS

Marcie Boucouvalas [1]

## Abstract

An examination of the scope and historical progression of hermeneutics, the art and science of interpretation, yields challenges for lifelong learning professionals.

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Hermeneutics, derived from the Greek word ῾ερμηνεῖα(interpretation),has come to mean the science and art of interpretation. The same root term is reflected in the name Hermes, the mythical Greek god who served as a messenger and interpreter between humankind and the gods. With theological and philological origins, hermeneutics has witnessed ongoing usage in the fields of law, history, literary criticism, and others; more recently in the human and social sciences, and most recently in education. With regard to adult education, Williams (1977) mentioned the term in issuing a plea for more methodological diversity in adult education research. Boucouvalas (1983) introduced the area to the Commission of Professors of Adult Education Conference, but developed thoughts more fully at a Human Science Research Conference (Boucouvalas, 1984), and a Philosophy of Education Conference (Boucouvalas, 1985). Collins,and colleagues Chené and Thiel (1985), investigated aspects and figures of the heremeutics tradition at an Adult Education Research Conference symposium where Chené (1985) and Collins (1985) gave separate papers on related topics.

The purpose of this paper is to examine the territory of hermeneutics and its historical evolution as a foundation for exploring its challenge to lifelong learning professionals. An appreciation for, rather than an operational skill in, the hermeneutic approach is intended. The latter will come about only by a more in-depth engagement with the hermeneutic literature.

## THE TERRITORY OF HEREMENUTICS AND ITS LARGER TERRAIN

The modern literature base on hermeneutics contains two main streams: (a) Hermeneutics as method (reproductive meaning) and (b) Hermeneutics as a way of thinking and knowing--more philosophical in nature (productive meaning). Whether as method or philosophy the development of understanding and meaning is central. As both an art and a science hermeneutics is part of a larger arena called the interpretive approach, which is different from the empirical-analytic approach in both foundational assumptions and aims. For example, the empirical-analytical approach seeks to discover "truth" by distancing the researcher from the researched to maintain objectivity, and result in accurate reporting. The interpretive approach seeks understanding and the creation of meaning via the intertwining of a dialectic between the researcher and the "researched" to result in a skilled version of our understood meaning. The biography of the researcher is likewise often offered for analysis.

The entire interpretive approach may be characterized as part of a post positivist (not anti-positivist) movement. The empirical-analytic tradition, based on the philosophy of logical positivism, is concerned with prediction and control and often excludes data which are not accessible via the senses. Certainty is important to knowledge claims.The post positivist movement places more emphasis on the most probable interpretation and recognizes the human realm as always in process. No one approach (empirical-analytic, interpretive, or other) is recognized as the most correct. Rather, a multi-modal epistemological approach is encouraged. Looking from different perspectives at the same topic should only serve to strengthen the findings.

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In moving beyond data acquired only via the senses the development of insight emerges as a concept expressed differently but with equal importance by hermeneutic writers. Insight is often derived from the process of reflection, but not just reflective thinking in the cognitive mode. The contemplative mode of consciousness is also implicated. It seems that society as a whole does not yet fully understand enough about the contemplative mode and its workings, although as far back as the ancient Greeks philosophers recognized that a fully balanced being was developed in both contemplative and analytic/action modes--what Heidegger would term meditative and calculative approaches. Insight, it seems, is one of the competencies needed to embark upon any hermeneutic inquiry.

## HISTORICAL BACKGROUND AND PROGRESSION

The earliest renditions of the concept derive from philology and theology. From ancient times, concern was centered on correctly interpreting the scriptures (e.g. Old and New Testaments, the Torah, etc.). Exegesis is the term given to the product of the interpretation, but the operation itself which resulted in the exegesis is termed hermeneutics. Although gradually over the years rules and principles were developed to guide interpretations, use of the term hermeneutics as an articulated system did not emerge and was not coined until about the seventeenth century. Dilthey (1900) explains:

> This art of interpretation has developed...gradually, regularly and slowly.... It is naturally transferred to others, predominantly through personal contact with the great virtuoso of interpretation or with his work. But at the same time every art proceeds according to rules.... Out of the battle between different views about the interpretation of key works and the resulting need to establish these rules, there arose the science of hermeneutics (p. 107).

As further observed by Dilthey, an "extensive literature has grown in the last four centuries" (i.e., 1500-1900). Early attempts employed the classical philological method of prescribing rules. Flacius, a 1567 author of Clavis, a canonical text designed to assist biblical interpretations, is credited with being the first to develop principles to guide hermeneutic ventures.For the first time rules were connected with the theoretical structure by means of postulates. Flacius was also the first to recognize the importance of interpreting and understanding a section or part of work from the composition and intention of the whole--a principle now called the "hermeneutic circle" which is central to all contemporary hermeneutic thrusts.

Others expanded upon these initial postulates. Via Semler (Preparation for a Theological Hermeneutics), grammatical analysis became more refined and the importance of the historical context of the writing was recognized, respected, and incorporated into the interpretative task. By 1761 when Ernesti published in Latin his Intitutio Interpretis: Novi Testamenti [English translation by Stuart (1827, 1842) Elements of Interpretation and Terrot (1823-33) Principles of Biblical Interpretation, 2 volumes] the influence of classical philological practice on the interpretation of theological scriptures was apparent, thus paving the way for a general methodology of interpretation governing secular and sacred texts, a feat ultimately articulated by Schleiermacher. Philologists Ast and Wolf also influenced Schleiermacher. For Ast the task of hermeneutics was to clarify the internal meaning of a work, the relation of the parts to each other as well as its relation to the total view of the author and the spirit of the age, the latter of which was Ast's distinct contribution to the progressive development of hermeneutics. Wolf described hermeneutics as "dialogue" with the author (in a written or spoken sense) and noted the importance of both understanding and explaining that understanding to others. Explanation, however, is not possible if one does not possess competencies needed for deep understanding. For example, he mentions the ability to enter the mental world of another, to empathize and attune with others.

The works of Schleiermacher, considered the father of scientific hermeneutics, mark a turning point. His general theory of hermeneutics (applied to secular and sacred texts, but as well as to legal and literary realms and further to any utterance written or spoken) consisted of two distinct parts: (a) Grammatical - explicitly stated canons to guide hermeneutic efforts, (b) Psychological - canons which required one to take into account the totality of the author's life and world (Schleiermacher, 1977). Reconstruction and re-experiencing of the author's mental processes and meaning was of constant concern to him and the importance and relevance of the hermeneutic circle unalterable. Understanding is a circular spiral in which understanding of the whole gives meaning to an understanding of the part and vice-versa. Logic alone will not suffice; an element of intuition is called for. In order for intuition to operate a relinquishing of control may be necessary.

After Schleiermacher's death Dilthey continued the movement toward a general theory of interpretation and saw it as the potential foundation for the human sciences (i.e., all disciplines which interpreted expressions of the human realm; for example, history, law, art, literature, psychology, etc.). He moved hermeneutics beyond the domain of texts to the area of understanding in general. Dilthey espoused a methodology which could approximate objectivity, yet recognized that the human realm could never be fully known. The concept of historicality was central to his thought. Essentially, it referred to the temporality of all understanding and the intricate way in which self-understanding and self-interpretation are bound up with an understanding of history. Dilthey added, however, that not through introspection but through examination of the expressions or carriers of life (e.g., literature, art, social life, etc.) does this come about.

This view of hermeneutics as "reproductive" i.e. as a body of methodolgical principles which underlie and guide interpretation--was continued by Betti, an Italian historian of law (starting in the 1950's). His extensive offering of canons further guided hermeneutic endeavors. E.D. Hirsch followed in 1967 with the first treatise in the English language (Validity in Interpretation and The Aims of Interpretationin 1976).

The stances of both Betti and Hirsch seem to have been fueled primarily by a reaction against a philosophically-oriented hermeneutics which began to emerge around 1927 with the publication of Martin Heidegger's Being and Time. He saw as the task for hermeneutics an exploration of how understanding came about, rather than the development of canons and methods to provide objective understanding. He emphasized that needed was not more steps, but a shift to a meditative thinking which was very different than the conceptual act of analysis. He suggested a wakeful openness rather than an inquiry and grasping.

In effect, Heidegger redefined heremeneutics to identify it more with phenomenology. Then, with the publication of Truth and Method in 1960 by Hans George Gadamer hermeneutic theory entered an important new phase. Although the title is misleading, Gadamer essentially has called method into question. Basically, both Gadamer and Heidegger are critical of modern technological thinking which views reason as ultimate. Particularly for Gadamer, the manner in which method prestructures thinking may even interfere with understanding. Participation and openness are more important keys to understanding than manipulation and control for these philosophically-oriented theorists. Others who have continued this lineage include Bultmann, Ebeling, and Fuchs. A more recent writer is Paul Ricoeur who, although seemingly sympathetic with the philosophical stance, clearly adheres to the importance likewise of method. With regard to Ricoeur and a comparison to Gadamer, Collins (Collins, et al., 1985) offers a more extensive discussion.

The two streams (heremeutics as method and philosophy) need not be viewed as antithetical ormutually exclusive in nature. They may serve in a complementary manner to access an even greater depth to interpretive efforts. Each seems to have its purpose and function whether employed individually for different situations and needs or together in the same effort.

## CHALLENGES

If lifelong learning professionals are to interface with and benefit from hermeneutics some prerequisite competencies (knowledge, skill, attitude) seem prepotent. Development of such competencies presents a foremost challenge which is two-fold: development of one's own competencies as well as those of the adult learners whom one serves. A helpful foundation is a knowledge and understanding that hermeneutics is part of a greater "interpretive" approach which is in turn part of a post-positivist movement, thus accounting for its contemporary resurgence, despite its lengthy tradition. Reality is witnessed from a different angle than is done within an empirical-analytical framework. Embracing and employing a hermeneutic approach requires more than a "cogito ergo sum" attitude. As expressed by a number of the writers cited, hermeneutics is exceedingly difficult to apprehend and comprehend in a purely cognitive manner. Both methodological and philosophical streams converge on the point that one must let the "text" (material or human) speak. Understanding and meaning are central, but are often resistant to purely logical analysis alone. Contemplative capacities are called upon particularly in reflecting upon the meaning which is understood via a to and fro movement from part to whole and back to part again. For example, by reading these pages, one cannot expect to initially understand the meaning in the fullest sense. Understanding emerges first in an unspoken vague sense then deepens with reflection. Even in employing the purely methodological canons of interpretation, an approach which seeks objective validity of interpretation, a receptive mode of allowing the text to speak is important. Understanding more deeply is different that understanding more correctly. Writers in the tradition have talked about attunement and the ability to enter the mental world of another and have called for a relinquishing of control and the development of self-knowledge. Clearly, a commitment to self-understanding and the importance of transpersonal aspects of growth is indicated.

Hermeneutics offers a perspective from which to function, but will require a more in-depth interface with the hermeneutic literature to be of operational or functional use. Some starting points, however, may assist. For example, program development efforts may be informed by MacDonald's (1982) article on curriculum theory. Listening and understanding another (in person or principle) is important in interviewing situations as well as everyday professional life. Since so many adult learning efforts are predicated on participatory input from needs assessment to evaluation, hermeneutic listening by Stewart (1983) should offer a preliminary starting point, the more formal interviewing situations of a research nature informed by Pilotta (1982), while a hermeneutic perspective on life history documents should benefit from Watson (1976). Consequently, the hermeneutic framework, attitude, or principles might be employed within other research methods, much the same way in which qualitative techniques can be employed in quantitatively oriented efforts. Historical research should especially benefit from the hermeneutic concept of historicity, that is the work should be understood in light of the author's entire world, including the spirit of the times. From a methodological perspective use of hermeneutic canons in interpreting classic texts in the field should prove useful. Also, familiarity and subsequent skill in applying such canons even in contemporary work might act as an impetus in improving one's own thinking, writing, and expression. Perhaps someone may be equally challenged to engage in an in-depth way with any one writer in the hermeneutic tradition and derive application for the practice and research efforts of lifelong learning professionals. In addition to the challenges which abound in actually conducting hermeneutic research or research which employs hermeneutic principles, an equal challenge abounds in translating research into practice. A deeper understanding which results from the hermeneutic approach would be helpful. Likewise with regard to critical thinking and analysis: Consideration of what the author intended would add a deeper and richer understanding to such efforts.

Language is rich and multi-modal, obscuring as well as revealing meaning. A useful purpose is served by operational definitions which produce clarity. Precision is gained, but something is lost. It seems time-appropriate to attempt to recover the many lost meanings and messages inherent in the field and to prepare for a future which provides for multi-dimensional (in addition to uni-dimensional) meaning formation. How will we respond to these challenges?

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NOTE: Due to space constraints full bibliographical citations of authors whose *titles* were listed in the text are not given but are available from the author as is an extensive bibliography.

# PARTICIPATORY MODES FOR EMPOWERING THE DISADVANTAGED

Beverly Benner Cassara[1]

## Abstract

Participation of adult learners in planning, research, program implementation and evaluation, and action for social transformation--a useful and popular aproach in developing countries--is now influencing adult education in the industrialized countries. Participatory research is a combination of education, research and action, closely interwoven so that there is no possibility of separation or sequence. This paper provides a general overview of the worldwide Participatory Research Movement and a report of a case study from Washington, D.C.

To set the tone for this presentation, allow me to make a somewhat extreme and simplistic statement about the development and the purpose of knowledge. Generally we can assume that from the beginning of time, knowledge has grown out of the needs and experiences of the persons who have dwelled on this planet, for the purpose of enhancing the quality of life. If the fruits of knowledge have never been shared equally by all, they have probably never been shared less equally than they are today. Nevertheless something is happening today that is hopeful. Because of modern communication systems and the great mobility of persons, even those most oppressed by poverty, ignorance and politics are beginning to develop a sophistication--a realization that knowledge is power and that they can create the knowledge they need to have a say in shaping their own destiny. One answer to helplessness and oppression, unfortunately, is destructive terrorism. Participatory research is one hopeful and constructive, even if modest, means toward social transformation.

Participatory research is an evolving adult education concept that includes research, education and action, with the three aspects so intertwined that there can be no separation or prescribed sequence, since the people, in any instance, will create their own which will grow out of their needs, their values, their resources and initiative. It is more than popular education or action education, for the research component may not be overlooked. That does not mean that some standard academic method must be used. To the contrary, techniques used successfully are community radio, popular theatre, dance, song, tours, camp-meetings, individual and group interviews, role-playing and photo-stories. It does mean that although the main purpose of the research involved is to provide a strong basis for action, the results should be shared as widely as possible, either orally or in writing, to document the creation of new knowledge.

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A UNESCO paper, Participatory Research for Adult Education and Literacy, published in 1980 by the International Council for Adult Education, suggests that participatory research should:

- promote collective analysis;
- promote critical analysis;
- promote relationship between personal and structural issues;
- link study and action, theory and praxis;
- be appropriate to local culture, economic and political conditions. (p.8)

It goes without saying that participatory research requires a political climate that allows sufficient freedom of expression and action.

While the concept of participatory research had been developing in Latin America in the decade of the sixties, especially under the influence of leaders like Paulo Freire, one could probably say that the movement as such took shape in Tanzania in the seventies. Budd Hall, now Secretary-General of the International Council for Adult Education, working in Tanzania at that time, found resistance among the people to the type of academic social science research which put them in the position of being objects of research. Further, the results of such research made little, if any, difference in the conditions of their lives. Freire's visit to Tanzania at that time gave focus to the issue and the Participatory Research Movement was born, with Budd Hall acting as the catylizing force.

In the intervening years many other leaders have come forward, and one should especially recognize the work of Rajesh Tandon, from India, who has provided creative and generative leadership for the movement in many countries in Asia, and around the world as well. He has also been responsibile for many small publications on the subject which have been produced by various national and local groups, as well as supporting various meetings and conferences for the Participatory Research Network.

One 1985 publication, copywrited by the Farmer Assistance Board, Inc. of the Philippines, Participatory Research: A Response to the Asian People's Struggle for Social Transformation, which is the proceedings from the second Asian Participatory Reseach Conference held in Manila in December of 1983, provides reports on a variety of situations in which participatory research has been efficacious. The cases summarized in this publication serve well to demonstrate the great variety of immediate purposes, methods and achievements that evolve through the participatory research mode. However, one must realize that this very diversity is the strength of the movement and not a weakness. It is proof that the people involved in any situation are following those very criteria suggested above from the UNESCO document. They are working within their own cultural value system to create the knowledge they need to take appropriate action to transform their own social reality.

A short summary of the work of the Women's Research Project in Poona, Maharashtra, India provides insight into just one of many kinds of participatory research efforts. The problem to be addressed was the suffering of the women in the slum areas, which included: poor education of women; marital problems; social problems of rape, dowry, community health, religious taboos, and blind acceptance of caste mores. The method employed was based on popular theatre, a traditionally male feature of the "dalit" caste to which these women belonged.

To quote from the the publication mentioned above, the women used popular theatre to "build rapport faster; involve (the women) in the research process in a natural way: draw their skills and creativity which express their perceptions, concerns and analyses; and make them `think' and `do,' raise their consciousness and confidence to find alternatives to their problems."(p. 69)

A group of five dalit women trained themselves by working with small groups of women to use methods like role-playing, role reversal and improvisations, and at the same time were training the women to understand that popular theater could be used as an initial means of presenting and explaining problems. When they had become acquainted with a particular slum area so that they were accepted by the people, they chose a local meeting place and presented theatre that addressed the local women's problems. After the presentation, they immediately held a discussion period with the audience which included both the men and the women of the area. With new information from these feedback sessions, they repeated the performance on the spot to take account of the new more precise information and the discussion session. The information that was gathered in this way, would then be developed into drama addressing the problems, giving a variety of solutions in dramatic form. Again the discussions provided a resource for other ideas about other solutions, why some would work and why some would not. The fact that the men were in attendance was a first step toward solving problems--the women were not just talking to themselves.Audio tapes were made of each performance for use in further discussion sessions.

Resulting action led the women into various income-generating projects to decrease their economic dependency, and then they saw themselves as equals in the household and, therefore, required that the men share the household responsibilities. The women developed enough self-confidence to question the blind following of the caste structure and the religious beliefs that oppressed them. New theatre groups, including women, were often formed which could then continue to address further local problems and possible solutions for action.

Here we have just one case, among hundreds, all of which are different. Farmers in Tanzania researched the problems in storing grain which caused 30-40 percent wastage each year. One group of American Indians in Canada revised the curriculum in the school to reflect their own values and the traditions of their culture. In the United States and other western industrialized countries, participatory research as such has not found ready acceptance. However, it is surely true that many instances could be found where innovative adult education ideas closely resemble the purpose and goals of participatory research, even though the special research function may not be clearly articulated. This is true of a case in which I, myself. was involved at a housing project in Washington, D.C., before ever having heard the words, "Participatory Research." Doing it today, I might work differently, still it is worth relating it here to show that the oppressed even in western societies can use the participatory mode to their advantage.

To find out why many low-income women do not take advantage of the educational opportunities provided by the city, I took students to a housing project to make a study. However, at the project the women told us in friendly, but, certain terms, that they were absolutely fed up with being studied. No study had ever improved their lot. They did invite us to come and be their friends and work with them to correct problems they endured, and allowed that if, in the course of these efforts, we learned things we wanted to know, then that was fine with them. Such an attitude is typical among oppressed persons in many parts of the world. They are ready to be the leaders in their social transformation, which we are beginning to realize is the only way it can really happen anyway.

We started by doing guess what? A door-to-door survey, with teams made up of members of the class and women from the project. I now know that we learned almost nothing from that survey, except one important fact. We learned that out of 150 families, there were only 26 male heads of households. For instance, we tried to get information about the educational interests of the residents, but they did not know what they really wanted or needed. They might give some answer just to get rid of us, or they might be unrealistically ambitious, or whatever. It was a question they were not prepared to answer. Our next step was more productive. We invited the residents to a meeting for open discussion, and about 25 attended. With this group, true participation, education and action developed, plus a little research, but we could have encouraged a whole lot more to the benefit of the women if we had been aware of this aspect at that time.

We did let the women lead us, and that turned out to be the greatest lesson we learned and the very most important ingredient in the success of the program. We were unfunded and that, too, was a blessing, since we had no deadlines and could move in the direction and at the pace of the women. At first, they were sure that they did not need more education. They believed that there were plenty of jobs out there for them if they only knew how to find them. This was something they expected us to help them do. We tried and we did actually place a couple in entry-level jobs, but entry-level jobs often wash out and so did these. Next, the women thought that they could get help from community leaders if they had a way of communicating their needs to them. For this we set up a series of workshops which community leaders did attend. They did discuss the needs and interests of the women. However, action in the short term did not result. Only then did the women start to think about education, but they only started.

They thought some very special courses could help them. First, they wanted nutrition courses, because many of them were overweight. We found a good teacher for them and they began but this effort taught them only one thing--that they were not prepared for the self-discipline required. Nevertheless, this was an important step in their progress toward self-understanding. They tried furniture refinishing and learned some more about themselves. They learned that they really could not afford the materials, that they did not enjoy working alone in their houses with many community things going on elsewhere, and that little was to be gained from one decent looking piece of furniture among others that were broken. Their next request was for driver education. We thought the city could provide this through the public schools, but the city said that low-income women should not have cars. We were very disturbed that bureaucrats should have such decision-making power over the lives of individuals and we found a way to get driver education for them by placing practicum students who happened to be driver-education teachers with them. This project was very successful and proved to be a turning-point in their development. Those who got their driver's licenses developed new self-confidence. It proved to them that they were as smart as all who drive around the city, even the mayor himself. They did have access to the cars of their boyfriends and could do their shopping much more economically away from the little shops in their neighborhood.

It was at this moment that they made a leap forward. They looked at the graduate students who came out to work with them each semester and decided that they got where they were by taking advantage of formal education. Now they were ready, and they asked us to help them prepare for the GED. There were many aspects to the program that cannot be elaborated here. Suffice it to say that we worked with the women at many different levels, securing help wherever we could find it, and eventually fourteen of them entered Federal City College, the predecessor institution to the University of the District of Columbia.

The whole project described here took about five years, but they were five years of positive growth and development for the women, all of whom eventually found rewarding employment, even if all did not finish the college program. Most of them moved out of the housing project, and last but not least, their own children stopped dropping out of school when their mothers took their own education seriously.

This indeed was a project of education, research and action. The women did their research the hard way--often through trial and error--but if it was slow, the lessons they learned were never wasted. Doing it over today I would encourage the women to take even more initiative, and while we did make an effort to transfer our successes to another housing project, we could do much more in establishing a network. I would also encourage them to tape their discussions and even possibly find a way to publish and market them.

In the United States today, the efficacy of participation is catching on. What people can do for themselves, they need never lose. This is especially important in the health field. Thus I was inspired and pleased to find that another speaker was using a participatory mode with community persons in Chicago.

# *THE PSYCHOLOGICAL WELL-BEING AND SOURCES OF STRESS IN RETURNING STUDENTS*

*Barbara A. Copland*
*Lucy C. Yu*[1]

## Abstract

*The purpose of the study was to examine the psychological well-being of adult students in their first semester of reentry at a large public research institution, to identify sources of stress, and to gather baseline data for a follow up study of retention. By surveying 143 adult students with four instruments and using summary statistics it was revealed that the sample showed positive psychological well-being during their reentry semester. Sources of stress were from concern over academic skills and lack of time to fulfill all the demands on their lives. Sex differences were indicated, but could not be tested due to the sample size.*

## *INTRODUCTION*

*The purpose of the present study was to examine the general psychological well-being of adult students in their first semester of reentry at a large public research institution, to identify the sources of stress, and to gather baseline data for a follow-up study of retention.*

## *BACKGROUND*

*The literature on reentry adults, particularly women, is replete with references to the stress they experience upon returning to college after a lengthy hiatus. Schlossberg (1978) states that any transition involves some degree of stress and even when returning to college is a positive experience, it still may be stressful. Stress comes from a number of sources including new demands on one's time, changes in interpersonal relationships, the press of multiple roles, the unfamiliarity with the college environment, and the concern over diminished academic skills.*

*Several studies have investigated role strain/role conflict in reentry students. Jacobi (1985), in a comparative study of traditional and reentry students, found that reentry women experienced more time pressure and role conflict than traditional students and received less social support. Yet reentry students reported less school-related stress, better health, and more satisfaction with college than did younger students.*

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Some studies have been done on sex differences related to the psychological adjustment of returning adult students. Gilbert (1980) studied the scores of interrole conflict that returning adults experience in meeting the demands of the student and other major life roles. Four themes of interrole conflict were investigated: (1) external family demands; (2) beliefs about gender roles; (3) interpersonal dissatisfaction; and (4) beliefs about role demands. It was found that sources of role conflict differed for men and women and followed traditional gender roles. In men, the basis for role conflict were their beliefs about selves and interpersonal dissatisfaction. Women experienced role conflict stemming from their beliefs about role demands and external familial demands. Men did not mention conflicts due to family demands whereas women's conflicts appeared to arise from role expansion.

Because adult students most often have other responsibilities in addition to school such as jobs, families, civic and social responsibilities, the opportunity for stress leading to anxiety is compounded. The present study explored the psychological well-being of adults reentering a large research university.

## METHOD

### Instruments

Four instruments were used for this study to identify variables contributing to stress, and to measure psychological distress, depression, and general well-being.

The Returning Adult Student Check List (Yu, 1985) was developed for the study to identify variables contributing to stress. Five separate components were designed to measure sources of stress: (1) employer, family, and friends; (2) academic skills; (3) time; (4) financial support; and, (5) anxiety.

The second instrument, the National Center for Health Statistics' Selected Symptoms of Psychological Distress (1970) measured psychological distress. It consisted of 12 items to which the respondent answered "yes" or "no".

The third instrument, the Center for Epidemiologic Studies Depression Scale (Radloff, 1977) was a self reported 20 item scale which measured depressive symptomology in the general population.

The final instrument used in the study was the Psychological General Well-Being Schedule (Duprey, 1974). The PGWB was designed to assess self representations of subjective well-being and distress.

### Sample

The sample was drawn from a list of 143 undergraduate students 25 years of age or older identified by the admissions office of a large Eastern university as being in their first semester of attendance at the institution. A cover letter and the four instruments were mailed to the sample in October of the fall semester. Two follow up mailings were sent at one and two month intervals. Forty-two percent (60) of the sample eventually responded to the survey suggesting that caution be used in interpreting the results. Of the 58 usable surveys, 36 or 62 percent were from males and 17 or 29 percent were from females. Five of those surveyed were not identified by sex.

### Analysis

Because of the exploratory nature and small sample in this pilot study, frequency analyses were used to see if there were different patterns between male and female students.

Variables contributing to stress, moral support, or encouragement from employers, family, and friends as measured by the Yu (1985) instrument showed 39 percent of the males and 41 percent of the females reported that they received little or no encouragement to continue their education from employers, family, or friends. Sixty-one percent of the males and 59 percent of the females felt they received encouragement from these sources. Overall, 33 respondents out of 53 (60 percent) of the sample reported receiving encouragement to continue their education.

Perception of the quality of their academic skills as a source of stress revealed that 67 percent of the males and 65 percent of the females felt they had poor academic skills. Thirty-three percent of the males and 35 percent of the females felt their academic skills were good.

Perception of needed time is related to the respondents sense of having enough time for leisure, family, and study. Sixty-five percent of the females had a perception of not having enough time while 47 percent of the males felt the same. For the entire sample, over half felt there was not enough time to do everything their lives demanded.

Twenty-three percent of both males and females received little or no financial support and 76 percent of both sexes received moderate support.

Twenty-one percent of all respondents reported symptoms of anxiety, with females showing more than twice as much anxiety than males. It is interesting to note that none of the sample showed indications of high anxiety.

Depression, as measured by CES-D, was revealed in 28 percent of the males and 47 percent of the females. One-third of the total sample reported enough depressive symptoms to be considered depressed during the previous week.

General well-being, as measured by the PWBS, was reported by 17 percent of the males and 41 percent of the females. Eighty-three percent of the males and 59 percent of the females indicated no distress. For the total sample, almost one-fourth reported distress during the previous month.

Analysis of the Symptoms of Psychological Distress (SSPD), indicates that of the total sample, only six persons did not experience any stress symptoms. Forty-four percent reported three or more psychological stress symptoms.

## DISCUSSION AND CONCLUSIONS

Some interesting patterns emerged from this pilot study. While more females showed symptoms of anxiety, depression, and stress, test of the significance of these differences between males and females could not be done because of the sample size. Generally, this particular sample of returning adult students showed positive psychological well-being with some stress after their reentry to school.

With what stress there was, it appeared to come from concern of the returning adults over academic skills and the lack of time to fulfill all the demands on their lives. The literature clearly supports these sources of stress.

Specifically, the findings support these conclusions:

1. More females were working for pay than males and that among all who worked, female students worked longer hours than male students.

2. Fewer females received encouragement from employers, families, and friends to return to school.

3. About 2/3 of the sample felt they had poor academic skills. There was no male and female difference in their perception.

4. More female students (65%) than male students (47%) reported that they didn't have enough time for leisure, family and study.

5. Male and female students received about the same financial support.

6. More females reported anxiety and depression symptoms than males.

7. Forty-four percent of the total sample reported three or more distress symptoms regardless of gender.

8. More males (83%) than females (59%) scored high on the general well-being scale.

Caution should be used in interpreting the results of this study given the size and skewness of the sample. However, some implications for institutions of higher education which are serving adult learners are that they provide academic support services to overcome perceived deficits in adult learners' academic skills and that they also provide assistance in time management for this group of students.

Suggestions for further research include factor analytic studies of the Returning Adult Student Check List (Yu, 1985), comparison of annual samples of new adult students with the results of this study, and study with a larger sample to use regression and to explore predictors of psychological stress among returning adult students.

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# CONTEXT AND LEARNING

Roy J. Ingham[1]

## Abstract

This paper reports what I have learned thus far while inquiring into the phenomenon of learning. Interviews have been conducted with 20 persons and secondary analyses of six other interviews have yielded the following working hypotheses. First, most learning, and particularly that which persons report to be of great significance in their lives, occurs nonconsciously. Second, what a person learns and the way learning occurs is the interaction of a person and his or her context. Third, the particular content of learning and the particular way it occurs in a persons life is determined by one's fundamental project.

Can you imagine who or what you would be if you did not learn? My guess is that you would be just about the same as when you emerged from the womb. The world would still be the "buzzing, blooming" confusion experienced at birth. Of course, you would be physically larger - but it is unlikely you would have lived to be your present age. Indeed, it is also unlikely that you or any other member of the species homo sapien would exist if we had not become capable of learning. When viewed in these terms, it becomes apparent that learning is fundamental to human existence.

My study of learning has been shaped by this perspective. As a result, I have come to view previous inquiry into learning to have ignored, for the most part, three assumptions which I think are vital to an understanding of this phenomenon. The first assumption is that the object of observation should be a person in his or her natural setting, rather than persons or a group. Thus, learning can be understood only through idiographic, not nomothetic, data. A second assumption is that most learning, and particularly that which adults consider to be most important, is nonconscious or nondeliberate. My third assumption is that learning is the activity through which a relationship is formed between a person and his or her contexts - a context comprising those aspects of the environment with which a person interacts, consciously or nonconsciously.

In the following sections I will discuss each of these assumptions and briefly report the results of an inquiry which has been guided by these assumptions.

## Studying Learning by Observing a Person in a Natural Setting

Nearly all of the studies of learning with which I am familiar report observations made of selected segments of human or animal behavior rather than observations of human lives taken in natural settings. Examples of such studies include the observation of persons learning; nonsense syllables (Ebbinghaus, 1913), esperanto (Thorndike, 1926), various topics including poetry learned by linear programming, and the solar system (Knox, Grotelueschen and Sjorgen, 1968) and card sorting tasks (Belbin, 1958). Studies of learning in which animals are observed are multitudinous, with that of Skinner (1938) being most well-known.

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A profoundly different approach that has been advocated by Kegan (1982) for the study of psychological processes represents this alternative form of observation. "Rather than make the practice of psychotherapy the touchstone for all considerations of help, look first into the meaning and makeup of those instances of unselfconscious 'therapy' as these occur again and again in nature . . . . However important and valuable the careful practice of 'unnatural' (selfconscious) therapy, developmental theory would seem to suggest that rather than being a panacea for modern maladies, it is actually a second-best means of support, and arguably a sign that the natural facilitation of development has somehow and for some reason broken down." (pp. 255-256). What this statement suggests to me is that those studying learning should look first into the meaning and makeup of those instances of unselfconscious learning as these occur again and again in nature.

A second concern I have with the ways in which learning has been studied is that it has been thought of as an intentional, purposive, or deliberate effort. Although studies of incidental learning have been reported, the studies themselves have always seemed to be incidental to the major issues concerning learning. Even the choice of the term "incidental" seems to relegate it to a low status.

The role of unconscious, or nonconscious, learning has received almost no attention in the literature on adult education. In a rare exception to this trend, Brookfield (1986) speculates that "If asked on their death beds to identify their most important learning experience many people would probably speak of the insight and understanding of self that they had developed while trying to make sense of some calamitous event or unplanned experience." (p. 213). Happily, inquiry into a person's most important learning experiences has been conducted with persons who still have a few years left before attaining the state of Brookfield's imaginary subjects. (I say "happily" because interviews with persons on their death bed would seem to impose severe constraints on the interviewing process.) The research to which I refer will be reported later in this paper.

My attraction to the role of the unconscious (the terms nonconscious and nondeliberate mean the same thing to me) came first from reading Bateson (1972). Consciousness comprises only a portion of the mind and is organized in terms of purpose. Consciousness ". . . is a short-cut device to enable you to get quickly at what you want; not to act with maximum wisdom in order to live, but to follow the shortest logical or causal path to get what you next want . . ." (p. 433). Failure to permit the unconscious to become involved in guiding action has prevented humans from exercising wisdom. Excessive purposefulness is the source of this failure.

Bateson (1972) also contends that much of the type of learning ". . . which . . . determines much of the relational life of all human beings, (a) dates from early infancy, and (b) is unconscious." (p. 300).

Lewicki's (1986) work on nonconscious social information processing has also contributed to my interest in the unconscious dimension relative to learning. He points out that most people are familiar with the phenomenon of first learning something, like driving, consciously and then finding that they can drive without consciously controlling their behavior. But something of which most people are unaware is that much learning occurs nonconsciously. He claims that ". . . human information processing involves at its various levels such nonconscious algorithms [to react in a certain way to certain conditions, such as driving a car]: (1) that definitely have never been learned at the level of consciousness, (2) that operate totally beyond one's conscious control, and (3) that are available to a person who follows these algorithms in no other way than by an 'outsider's viewpoint' observation of how they operate." (p. 11).

My third concern about the study of learning is the central role of context. In the quest for "laws of learning," the methods, typically based on the assumptions of positivism, have engaged in "context-stripping" procedures. Gergen (1973), cited in Mishler (1979, p. 5) has concluded that "the continued attempt to build general laws of social behavior seems misdirected . . . " (p. 316). The concept of learning involves meaning.

An event or object gains meaning as it is experienced within some context. "Without context," writes Bateson, "words and actions have no meaning at all" (1979, p. 15). And later in this same work, Bateson observed that "there are hundreds of ways in which the components of the contexts of learning may be interlinked, and, correspondingly, hundreds of characterological 'traits' of which hundreds the experimenters have looked at about half a dozen - strange." (p. 134). Another aspect of contexts is that they are reflexive with respect to actions. In Garfinkel's terms (cited in Mishler, 1979, p. 15), ". . . meaning and context are produced simultaneously by the actors in and through their interaction."

## A Report of An Inquiry into Learning Guided by the Foregoing Assumptions

I have been inquiring into the phenomenon of learning by interviewing approximately 20 people - all of whom were graduate students at the time of the interviews and conducting secondary analyses of case studies reported by Nelson (1984). My initial idea was that I might gain a knowledge of how a person learned by asking that person to describe the circumstances through which he or she learned to become that kind of person. The interviewees had little trouble identifying these episodes in their lives. However, when I discussed the characteristics of these episodes with them, the interviewees, and myself, had little confidence in this information constituting an answer to the question, "How does a person learn?" or more precisely, "How did you learn?" The intent of this line of inquiry was that by obtaining an answer to this question, both the interviewee, and anyone else who was to become involved in designing an instructional activity for the interviewee, would have a valid basis fo doing so.

My next approach was based on the interest in context. I interviewed four of the same people interviewed previously, asking them to provide an elaborate description of the setting in which each had learned something of great significance in their lives.

My working hypothesis was that what a person learns is a consequence of the interaction and learning is the interacting between that person and a particular context. I also temporarily abandoned the quest to answer the question how a person learns. I feel that the term how connotes a technique - or mechanical explanation for learning. How appears to me to be causal in its meaning. Thus, if I say that a person learns by imitation, the meaning is that imitation causes learning. It is more likely the case that learning and imitation are interactive.

From my interpretations of the descriptions of the contexts described by interviewees, the tentative observations I would make are:

1. much of what a person learns, in particular those things which one identifies as important to his or her life, is done nonconsciously or nondeliberately. No plan to learn what was learned was formulated beforehand.

2. conscious learning occurs when a person has a previous tacit knowing of what is to be learned. The knowing comprises the "comprehensive entity," (Polanyi, 1966) or context within which the "particulars" can be given meaning. Thus, resistance to learning something in particular which someone is attempting to teach constitutes the particulars of a comprehensive entity that the person nonconsciously knows and does not wish to consciously know for fear of losing what is known. It is at this point that emotion permeates the learning process. (More, 1973)

What follows is an account of one interviewee's responses and my interpretation of these responses.

The interviewee, referred to hereafter as Gloria, stated that one learning outcome that she considered significant in her life was that she learned to relate to others and herself in ways she did not like. The environment in which she learned into this type of person included a father who she described as very dominant, who was very critical of her, and who had frequent verbal and physical conflicts with her mother, who was an alcoholic. She said she would have given anything to be able to stop these conflicts. She also had a younger brother who she felt she had to take care of and protect. She was in this environment from the age of five until she left home at the age of 16. Her interaction with these elements of her environment resulted in her constructing a context that may be characterized as one of disharmony. It was as a part of this context that she learned the significant outcomes identified above. Several years later, she feels she still relates to others and herself in ways she does not like.

## An Interpretation of Gloria Learning

My interpretation of this case has Gloria learning nonconsciously those significant outcomes she identified. Even though she had no desire to become this type of person, she learned this so well that she is still this type of person nearly 15 years later.

Further, what she also knew tacitly was that her "fundamental project" (Sartre, 1963) was to change a disharmonious context into a harmonious one. But the skills she learned were those which enabled her to build only disharmonious contexts, which she is evidently still doing. The comprehensive entity she tacitly knew was the "family-in-disharmony." What has not yet been determined are the particular actions (skills) Gloria has learned to attain this comprehensive entity.

In the latest interview (we have spent approximately 12 hours in conversation on this topic) she described four activities through which she feels she is learning another comprehensive entity - community-in-harmony. In her words "The thing I learned that contributed significantly to my life is in order to acquire control over or triumph over something which is limiting you, you must first fully accept it and, so to speak, become one with it. This is first recognizing that it exists which is often quite difficult because it is like a blind spot - you can see its effects but not it. It's like not seeing the forest for the trees."

I construe this response to indicate that Gloria is now conscious of what she had learned nonconsciously. What is also of profound significance is her realization that much of her learning has been directed by the fundamental project of effecting the comprehensive entity of community-in-harmony. One example of this is her account of learning to be a "tough" person. "By tough I mean not complaining." This disposition has become a way of learning for her in that she feels she has to talk through with others whatever it is she is trying to learn. She also minimizes her critical reaction to new information or ideas. This action is taken to ensure that the person she is becoming through learning something is one capable of effecting a community-in-harmony.

As she put it, ". . . even if I read something quite profound I still need to talk to somebody about this - bounce off each other; interaction with others also provides a means of learning about other persons."

## Summary

Space limitations prohibits describing and interpreting other data obtained through the interviews. Hopefully, the case study reported above will serve to demonstrate how I have attempted to conduct inquiry into learning based on the three assumptions identified earlier.

At this point in this continuing inquiry I have some confidence in the following working hypotheses:

1. What a person learns and the way they learn is the activity of interacting with a particular context which the person helps define.

2. What a person learns and the way the person interacts with that context (the activity of learning) is heavily influenced by that person's fundamental project which is known as a consequence of nonconscious learning.

3. A person will learn that which constitutes the particulars of an already known comprehensive entity.

My primary interest for communicating at this time my thoughts on learning is to hopefully stimulate criticism and possible collaboration. Definitive assertions about learning, if they are to be forthcoming at all, will require considerable further study.

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# THREE FORMS OF LEARNING IN SOCIAL CONTEXT

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## ABSTRACT

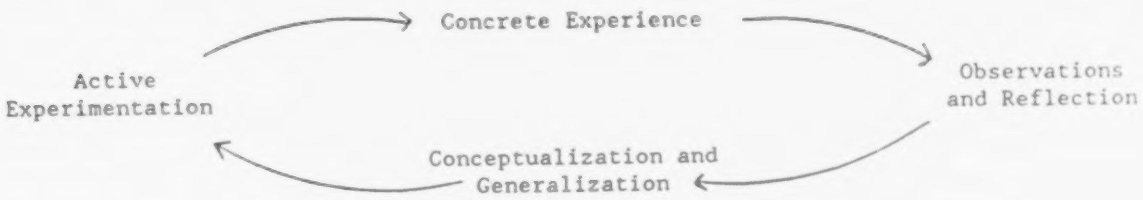
This paper is an analysis of different forms of learning in their social context. The forms of learning emerged from a research project into the ways that adults learn and the subsequent analysis endeavours to locate the types of learning within the wider social context. It is a tentative movement in the direction of a sociology of learning. There is not really sufficient time during this presentation to argue for a definition of learning and so one is suggested here: that learning is the transformation of experience into knowledge, skills and attitudes. The first part of the paper briefly describes the research project itself and its findings; thereafter there are three parts which discuss the three main forms of learning; finally, there is a brief concluding discussion.

## THE RESEARCH PROJECT

Over the period of about fifteen months in 1985 and 1986 groups of adults were the subject of a project to discover something more about the way in which adults learn. All the participants were first invited to write down a learning incident in their lives. They were asked to state what started the incident, how it progressed and, finally, when and why they concluded that it was completed. Having undertaken this exercise they were then paired in order to discuss their different learning experiences and it was suggested to them that they might like to examine the similarities and the differences in their experiences. Thereafter, two pairs were put together and they then discussed their four different learning experiences. At this time, they were asked if they would draw a simple model of their joint learning experiences, and some of them actually constructed some quite sophisticated models of learning.

The first time this exercise was conducted the groups were asked to feedback their ideas at this point for a general discussion. Thereafter, they were given a copy of Kolb's learning cycle and it was suggested to them that they might like to adapt it to relate to their own experiences. Kolb's (1984) learning cycle is given in Figure 1 below.

Figure 1 Kolb's Learning Cycle


Concrete Experience
Active Experimentation
Observations and Reflection
Conceptualization and Generalization

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Participants were informed that the cycle was not necessarily correct and that they were free to adapt it in any way that they wished, so that it would relate to their experiences. From the feed-back from the first set of groups a more complex model of learning was constructed by modifying the above learning cycle but also which related tothe findings of each of the groups of four people. Whenever, this exercise was repeated thereafter, the last stage each time was to introduce the adaptation of Kolb's cycle that had emerged from the previous time that this had been undertaken.

This exercise was conducted on nine separate occasions both in the UK and in the USA, with teachers of adults and teachers of children, with university lecturers and adult university students who were teachers of adults in their full-time occupation, with younger people and with some not so young participants, with men and women. In all about two hundred people participated in the exercise, although the sample was middle class and not tightly controlled. A complex model of learning was constructed as a result of the research. This model was subsequently tested in seminars, etc. over another nine month period, again both in the UK and the USA, with some two or three hundred people participating in these. An early draft of the model was published (Jarvis 1986) and a further draft is to appear in Adult Education Quarterly. The final model will appear, with a full description of this methodology in a book (Jarvis 1987) Adult Learning in the Social Context to be published later this year. However, the purpose of this paper is not actually to examine the model, as such, but to analyse the various types of learning responses that were discoverd.

It will be noted from the definition of learning suggested at the outset of this paper that it is claimed that all learning commences with experience, so that there is a sense in which learning might be regarded as a response to experience. Basically, it is suggested that there are nine types of response to an experience and that they may be classified into three fundamentally different types of learning: non-learning, non-reflective learning and reflective learning. Each of these three types contains three sub-types and in the reflective learning stratum there are two forms of each of the three types. Now the purpose of this analysis is to relate each of these types to a wider social context, and this is undertaken in the next three sections.

## NON-LEARNING IN THE SOCIAL CONTEXT

Non-Learning in the Social Context: It is very clear that people do not always learn from their experiences and so the first group of responses are non-learning ones: non-consideration and rejections. Each of these three sub-types are now described briefly.

Presumption is the rather typical response to everyday experience. Schultz and Luckmann (1974, p, 7) describe it thus:

> I trust the world as it is known by me until now will continue further and that consequently the stock of knowledge obtained from my fellow-men and formed from my own experiences will continue to preserve its fundamental validity..... From this assumption follows the further and fundamental one; that I can repeat my past successful acts. So long as the structure of the world can be taken as constant; so long as my previous experience is valid; my ability to operate upon the world in this and that manner remains in principle preserved.

While this appears almost thoughtless and mechanical, it is suggested here that this is the basis of all social living. It would be quite intolerable for people to have to consider every word and every act in every social situation before they undertook it. Hence, a great deal of life is lived on the basis of previous learned experiences and presumption is a typical response.

Non-Consideration: For a variety of reasons people do not respond to a potential learning experience; maybe because they are too busy to think about it or maybe because they are fearful of the outcome, etc. Thus it may be that non-consideration is another response that occurs quite commonly in everyday life to potential learning experiences.

Rejection: Some people have an experience, think about it but reject the possibility of learning that could have accompanied the experience. For instance, think of an elderly person experiencing the complexity of modernity and exclaiming, 'I don't know what this world is coming to these days!' Here is a possible learning experience, an experience of the complex modern world, but instead of probing it and seeking to understand it, the person rejects the possibility. While the illustration here is with the elderly, it could have been with the not so elderly; with the bigot, who looks at the world and says that (s)he will not have any opinion/attitude changed by it, etc.

Non-learning confirms those in power in their position, confirms those who structure and interpret reality for people in their position and basically affects nothing. Yet, the significant thing is that without non-learning no society or organization could have stability and, therefore, it is vitally important for the continuity of society--whatever the society in question may be.

## NON-REFLECTIVE LEARNING IN THE SOCIAL CONTEXT

These forms of learning are those which are most frequently socially defined as learning. For the sake of convenience the three that have been isolated in this research project are: pre-conscious, skills learning and memorization. The factor above all else that enables them to be placed within one stratum together is that they do not involve reflectivity.

Pre-conscious learning is one on which there is little research. It occurs to everybody as a result of their having experiences in the course of their daily life about which they do not really think nor about which they are even particularly conscious. They occur at the periphery of the vision, at the edge of consciousness, etc. Ruth Beard (1976, pp. 93-95) calls this incidental learning and she suggests that people develop such phenomena as schemas of perception as a result of these experiences. Other scholars who have been interested in this approach include Mannings (1986), who researched incidental learning in an adult education institution, and Reischmann (1986), who presented a paper at AAACE in which he talked about learning *en passant*. Now this research project was not itself aimed at analysing this type of learning, although a number of the respondents mentioned this possibility during the research itself. It is similar in approach to the next two forms of learning.

Skills learning is traditionally restricted to such forms of learning as training for a manual occupation or the acquisition of a high level of physical fitness through training. However, some learning in preparation for a manual occupation is certainly not non-reflective, so that this has to be restricted to the learning of simple, short procedures that somebody on an assembly line might be taught. These skills are often acquired through imitation and role modelling.

Memorization is perhaps the most commonly known form of learning. Children learn their mathematical tables, their language vocabularies, etc. Adults, when they return to higher education, sometimes feel that this is the type of learning that is expected of them and so they try to memorize what such and such a scholar has written, etc. so that they can reproduce it in an examination. Hence, the authority speaks and every word of wisdom has to be learned, memorized.

The significance of these approaches to learning in the wider social context become very clear. As long as these approaches to learning are practiced, then learning is nothing more than a process of reproduction. Society and its structures remain unquestioned and, consequently, unaltered. People learn and as a result they fit easily into the larger organization or the wider society, they learn their place--as it were.

Once again, this may be examined from the position of the individual and the wider society.

## REFLECTIVE LEARNING IN THE SOCIAL CONTEXT

Thus far it has been shown that learning tends to be reproductive, simply because that is the way that it is frequently defined socially. It was suggested that non-reflective learning could not do other than to reproduce the social structures of society, but this is not true of reflective learning. These forms of learning involve the process of reflection, and thinkers such as Freire (1972a, 1972b *inter alia*), Mezirow (1977, 1981), Argyris (1982 *inter alia*), Schon (1983 *inter alia*), Kolb (1984) and Boud et al (1985) have all examined the process of reflection. Because of Freire's work it might be assumed that all reflective learning has to be revolutionary, but this must not be assumed to be the case. Reflective learning is not automatically innovative. But before this is discussed it is necessary to examine the three types of reflective learning that were discovered in this research: contemplation, reflective skills learning and experimental learning.

Contemplation is a form of learning that behaviourist definitions of the phenomenon make no allowance for and yet, in many ways this might be viewed as a very intellectual approach to learning because it involves pure thought. This is the process of thinking about an experience and reaching a conclusion about it without reference to the wider social reality. The religious type of terminology was carefully chosen since it allows for meditation, as well as the thought processes of the philosopher and the activities of the pure mathematician.

Reflective skills learning, is called *reflectie practice* in the book Adult Learning in the Social Context. This is one of the forms of learning that Schon (1983) concentrates upon, when he points out that professionals in practice think on their feet. In the process they often produce new skills as they respond to the uniqueness of their situation. Indeed, it was pointed out earlier that there are not many forms of skills that are learned in a totally unthinking manner, and so this may be regarded as a more sophisticated approach to learning practical subjects. It is not only learning a skill but learning about the knowledge undergirding the practice and, therefore, why the skill should be performed in a specific manner.

Experimental learning is that form of learning in which theory is tried out in practice and the end-product of the experimentation is a form of knowledge that relates fully to social reality. This approach to learning relates very closely to Kelly's (1963) understanding of human beings as scientists, seeking always to experiment on their environment.

### Conclusions

This paper has suggested that all learning begins with experience and that there are at least nine possible learning responses to experience which may be classified within three strata: non-learning, non-reflective learning and reflective learning. Additionally, it recognizes that there are two types of each of the reflective learning responses and these are conformist and innovatory. The paper has sought to demonstrate that in the non-learning, non-reflective learning and conformist reflective learning, the outcomes of the learning do not create a change situation and, therefore, do not threaten in any manner the position of the elite in an organization or society. Hence, people can feel free and the power of the elite can be exercised covertly--this is the hegemonic position isolated and discussed first by Gramsci--so that people are not always aware that they are in a situation that is bounded by power structures. However, the power situation may itself be one reason for learning in a non-reflective manner and also a reason why it should not happen! By contrast, when innovatory reflective learning occurs, it creates the possibility for change. Recognition of the appropriateness of expressing the learning outcome might itself be an indication of the power exercised by the elite in the organization or society. Finally, there is recognition that people higher in the social strata may find it easier to express the outcomes of innovative reflective learning.

That learning tends to be socially defined in non-reflective learning terms is an indication of the structures of society. That learning is predominately conformist is an indication of the strength of the social structures. That reflective learning can be innovatory is beyond doubt but no organization nor society could sustain the potentiality for change all the time and no elite could tolerate it, so that learning tends to be socially defined in conformist terms. In contrast, innovative reflective learning, the outcomes of which could prove benefitical to the organization or society as a whole, tends to be regarded by some as nuisance, in the least, but also by others as threatening or even subversive, and the more that it is seen as subversive the more it is defined as revolutionary thinking.

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# INFORMAL ADULT EXPERIENTIAL LEARNING - REALITY IN SEARCH OF A THEORY AND A PRACTICE

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## Abstract

Until recently educational theory and practice have paid little attention to the nature and processes of informal learning from everyday social, occupational, and community activities. The paper presents selected findings from recent studies of informal adult learning. These early findings already provide some outlines of the types of learning that occur, their frequency, underlying processes, and the factors that affect them. The paper concludes with a preliminary model of informal adult learning followed by implications for educational practice.

## ADULT LEARNING IN INFORMAL SETTINGS

Informal learning in the course of everyday life accounts for a far greater proportion of total learning in a society than that which derives from formal instruction (Lovell, 1980). Formal education occurs in structured situations with a pre-determined curricula and a designated educator. Non-formal education is characterized by a life or work-centered curricula, participatory learning, and accessible formats. Informal education refers to learning that takes place as people interact with their environment in normal social, occupational, and community activities (Whitmore, et al, 1986). Most theory and research in education focuses on learning as it occurs in formal or non-formal settings which have some form of explicit educational or human development purpose.

Within that context of planned education and human or social development, both pre-adult and adult, considerable attention has been given to ways to relate learning and experience (Boot and Reynolds, 1983). Among the many writers with experiential learning perspectives are those who view action and reflection as the basis for learning. The principal exponent of this view was, of course, John Dewey (1916). Those writing from a holistic perspective on learning include Rogers (1969) and Cell (1984). They argue that one's feelings, attitudes, and values, as they are experienced, are the raw material of learning. Mezirow (1981) and Boyd and Fales (1983) concentrate on the reflective, abstractive components of experiential learning. A number of other writers emphasize the role of experience in the social processes of a group as fundamental to learning (Thelen, 1960; Bradford, 1965; Kolb, 1984). Finally, others in the dialectic tradition (Friere, 1972) focus on empowering individuals to change society through a process of group reflection and action. Clearly there is no dearth of theory and practice regarding the linking of experience and learning for intended educational or developmental purposes.

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It is only recently that those concerned with adult learning have moved beyond intentional educational and development settings to examine learning from natural and everyday experiences (Hamlyn, 1978; Mumford, 1980; Miles & Charters, 1970). According to social constructionism knowledge (e.g. learning) is social or group-based in its origim and purpose. Though the purpose of the research emphasized in this paper is on individual learning, social constructionism offers another promising alternative for study of informal experiential learning. The purpose of this paper is to summarize selected findings from a small sampling of studies of individual adult learning in informal settings.

The findings in this paper suggest key themes meriting integration in expanded experiential learning theories. They may even represent the beginning of a theoretical model of informal adult learning. In either case, the findings—even at this early date--have distinct practical implications for educators concerned with facilitating improved adult learning and performance.

## LEARNING PRODUCTS AND INSTANCES

In the presentation of findings I will discuss learning products and learning instances. Learning products are beliefs one can articulate or that are evident in one's behavior. They provide interpretations of events that serve to guide one's actions. They represent products of learning because they consolidate and integrate previous concepts and experiences of the learner. This concept of learning products is similar to Schon's (1974) "knowing-in-action" and "reflecting-in-action."

Instances of learning are discernible changes in the quality of one's beliefs or one's behavior. Such changes include the initial formulation of a current belief and changes in the substance or generality of a belief. Learning instances provide clues to the origin and previous evolution of current learning products. They also reveal the processes by which learning takes place. The empahsis of most of the following studies is on beliefs and their changes rather than on observed behavior and its changes.

## STUDY FINDINGS - INFORMAL EXPERIENTIAL LEARNING

In recent years studies in two areas have begun to explore the learning that occurs in the course of non-educational community or work activities. Studies in management are seeking to identify approaches other than formal training to foster managerial development (Lombardo, 1986; Burgoyne and Hodgson, 1983; Davies and Easterby-Smith, 1984). Working in a different vein, others (Whitmore, et al, 1986; Rossing and Russell, 1986) are seeking to examine the commonly advanced claim (Lassey and Fernandez, 1976) that citizens acquire important knowledge and skill from participation in community activities.

The studies of Lombardo (1986) and Whitmore et al (1986) illustrate the investigation of informal experiential learning through a focus on learning products. Lombardo asked top executives of large organizations to describe important events in their development as leaders and the lessons they gained from those experiences. He found that managers tended to draw similar lessons from similar classes of events. For example: from fix-it assignments managers tended to learn lessons about building structure and control systems. High-performing managers tended to draw more lessons from previous developmental events than low-performing managers. Most developmental events occurred during the manager's thirties following their initial phase of employment.

Whitmore et al (1986) studied the learning that occurs informally through participation in rural community groups. They focused on statements made in interviews of participants that reflected acquisition of insights, knowledge, or skill as a direct result of community group participation. Analysis of those statements yielded several categories of learning. Three significant dimensions they noted were: learning about internal group dynamics versus external factors, gaining knowledge versus skill, and learning about one self versus learning about others. They found that the amount and type of internal versus external learning varied significantly across different types of organizations and showed some relationship to the role of the individual in the group. Persons who had the most difficulty identifying specific learnings stemming from their present involvement were those who had considerable previous experience. These persons had difficulty in pinpointing recent learning. Finally, Whitmore et al discuss variations in group composition, structure, and goals that seemed to influence participant learning and satisfaction.

For an example of a study that focuses on learning instances and the processes underlying those instances, we must return again to the area of management. Burgoyne and Hodgson (1983) observed and recorded male managers at work and, where possible, asked them to think aloud during the work incidents. Shortly after the real-time incident they asked managers to recall their thoughts and feelings and to describe why they acted as they did. Then, several weeks or months later, they interviewed the managers again to discuss subsequent developments and updated interpretations.

Their study revealed different levels of informal managerial learning. The first level pertained to acquiring new, relevant information. The second, and most frequent level of learning was when a manager changed his conception about a particular situation such that a different response became operable for the present or the future. They found that level 2 learning, in some cases, occurs gradually and unconsciously. Only as a result of the research interview did instances of such unconscious learning become consciously recognized. In other cases, learning occurred as a result of a deliberate effort by the manager to reflect on an incident. Wild's (1963) concept of primary and secondary thinking parallels Burgoyne and Hodgson's findings. Also, much of the level 2 learning they identified had occurred previously, and was only put into use in the observed incident. The third and very rare learning level occurred when a manager became conscious of his conceptions of the world in general, their origin and how he might change them. The levels of learning Burgoyne and Hodgson describe are similar to those presented by Bateson (1973) and Argyris and Schon (1974).

The last study I will present is one the authors have been conducting. Our study was developed to investigate experience-based community leadership development. We intend to gain insights that could contribute to improved education of community leaders. We interviewed forty members of 5 rural community problem-solving groups. In our interviews we explored the beliefs of the participants regarding effective functioning of community groups. Participants were asked to recall previous experiences that contributed to the development or evolution of those beliefs. Specific experience segments were discussed to shed light on the processes associated with informal experiential learning. The findings presented below are based on analysis of 15 participant interviews.

Our findings extend and elaborate the patterns summarized in the three preceding studies. The number of belief themes presented by individual participants varied from 4 to 14. To date, however, no clear factor has emerged to account for this variation comparable to the association with high and low performance noted by Lombardo (1986). Examples of beliefs representing most of Whitmore et al's (1986) categories have been found although the focus of our study (e.g. group functioning) tends to bring forth primarily internal beliefs. Also similar to both Whitmore et al and Lombardo is the finding that certain types of beliefs are associated with certain classes of events or settings. For example: participants are more likely to acquire beliefs about the role of compromise from experiences in elected governmental groups, where views vary widely and are strongly held, than in private, voluntary groups where common views are more prevalent. Finally, while not analyzed in any detail, it appears that beliefs identified in our study span a wide spectrum of learning levels comparable to the range noted by Burgoyne and Hodgson.

We have also noted variation in the generality of beliefs held by participants which is similar to that discussed by Burgoyne and Hodgson (1983). In the most common pattern participants describe some aspect of group functioning they have experienced and conceptualized in one group situation, but present it as a general prescription for all group situations. A less common pattern is to describe beliefs that explain only the referent situation, nothing more. Only in rare instances do participants provide an interpretation of the application of their belief across varying designated situations. These findings suggest variations in the cognitive complexity (Harvey, 1966) of participant beliefs.

We have paid particular attention in our analysis to what I've called learning instances. These are instances in an interview where a change in the participant's belief is either recalled and described by the participant or can be inferred from the participant's recounting of beliefs and experiences. Such instances are relatively uncommon. In no cases do participants demonstrate a learning instance for more than half of the beliefs they describe. In several interviews no learning instances were discernible.

Each learning instance was analyzed to identify situational factors associated with such belief shifts. In most instances the learning occurred through an attempt to resolve some uncertainty posed by events the participant was experiencing. Such events contradicted the participant's expectations or offered new information for assimilation. Examples of such situational factors include experiences of: "knocking my head against the wall," being surprised by a turn of events, observing effective and ineffective behavior of others, and experimenting with a new response in an uncertain situation.

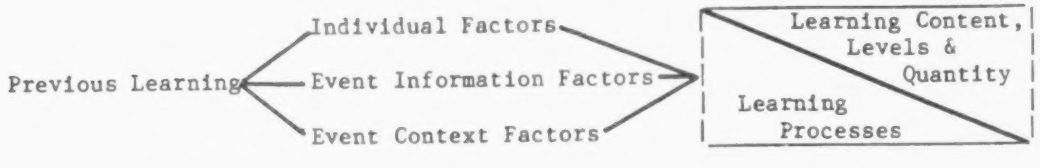
The timing of learning incidents identified in our study coincided with results of Lombardo's (1986) and Whitmore et al's (1986) studies. Most learning instances occurred sometime after one's initial entry into community activities. Few instances were based on very recent or current experiences.

In eliciting descriptions of learning instances an attempt was made to discover the underlying learning process. Kolb's (1984) experiential learning cycle model was employed to guide the search. There are two principle findings at this point. First, it appears that the reflective observation phase of the cycle is relatively rare and is not necessary for learning to occur. The second finding is that beliefs are often traced back to constellations of experience rather than specific incidents as implied in Kolb's model. This finding supports Burgoyne and Hodgson's conclusion that some experiential learning occurs gradually on the basis of cumulative experience. These departures from Kolb's model suggest that caution should be exercised in using the model to describe learning in informal settings.

## INFORMAL ADULT EXPERIENTIAL LEARNING - A PRELIMINARY MODEL

Space limitations do not allow an adequate presentation of the potential model of informal adult learning suggested by the preceding findings. Figure 1 attempts to portray the most critical factors. It expands and revises Whitmore et al's (1986) learning and participation linkages model.

Figure 1.[1]
Informal Adult Experiential Learning



## EDUCATIONAL IMPLICATIONS

Several significant implications for educators can be drawn from studies of informal adult learning. Three will be cited here. The most significant is the recognition that adults enter any learning situation with beliefs grounded in their unique history of experience. Any subsequent learning must be related to and built upon this foundation.

The most effective stimulus to additional learning is confronting learners with information or events that surprises them or that confounds or expands on their previous learning along with opportunity and aid in developing new interpretations.

A second implication is that learners as well as educators may not be fully conscious of, or sensitive to, the rich experiential learning that each person possesses. By directing an adult's attention to their beliefs and their previous experiences educators and learners can help to raise such learnings to a conscious level.

A third implication is that educators can perform a much-needed role in fostering increased reflection in action settings. Such reflection can allow individuals and groups to recognize and correct the distortions and hasty generalizations that sometimes occur in the frequently unconscious formation and application of beliefs in everyday work, social and community activities.

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# A Comparison of The Value Orientations and Locus of Control of Adult Learners in Schools of Business and Education

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## Abstract

The purpose of this study was to describe the Locus of Control and Value Orientations of adult learners in a university setting as well as the relationship between these variables. Demographic information and data from Rotter's Internal-External LOC scale and Rokeach's Value Survey were gathered from 1139 adults. Results showed that older adult students, especially the males, were internally oriented. Significant age and sex difference trends were observed for both terminal and instrumental values as tested by ANOVA's. Subjects within both schools viewed the top ranked values similarly indicating that the variables of age and sex, and not school curriculum, accounted for the differences in the perceived importance of the values. Partial correlations of terminal and instrumental value rankings with LOC scores controlled for age and sex indicated that internally oriented learners in both schools viewed the top ranks similarly but differed in the perceived modes of behavior for attaining these terminal values.

The characteristics and learning styles of a new generation of adult learners who use universities for career preparation, enhancement, re-tooling, promotion or mid-career change has been reported for some time (Cross, 1976; Londoner, et. al., 1985). Do adult learner differences such as age, sex, self-reliance and values affect the way faculty interact with these new learners?

Traditionally educated faculty do not appear to have made any real adjustments to their teaching styles or techniques to accomodate these adult learners. It is clear, however, that these adult learners portray differences in their value systems and in their sense of self-reliance and personal control of their lives. Should faculty heed these age differences, value orientations and self-reliant behaviors of the adult learners who are becoming more conspicuous in their classes? Research answers to these questions are just now being systematically studied.

Adult education and adult development literature stress that as age increases there is an internal orientation shift in perceived values and locus of control (Levinson, 1978; Gould, 1978; Knoop, 1981; Londoner, et. al., 1985 and Linder, et. al., 1985).

Social learning theory (Rotter, 1966; Phares, 1976; Lefcourt, 1982, 1983) is used to explain Locus of Control (LOC) and self-reliant behaviors. This hypothetical construct stresses the idea that behaviors are determined simultaneously by the variables of expectancy and reinforcement value. Internal control refers to the belief that the occurrence of reinforcements are contingent upon one's own behaviors. External control refers to the belief that fate, luck, chance, powerful others or the system determine outcomes.

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Rokeach (1973, 1979) has pioneered research on value orientations and has shown that there are developmental patterns in values as people age. Specifically, he described two sets of values: terminal or ends-oriented values and instrumental or means-oriented values. Terminal values refer to goals that are worth striving for (e.g., "Self-Respect," "A Sense of Accomplishment," "Freedom," etc.). Instrumental Values refer to conceptions of desirable modes of behavior that help to attain valued outcomes (e.g., "Intellectual," "Ambitious," "Courageous," etc.).

The systematic study of the relationship that may exist between LOC and values of adult learners in higher education settings has recently begun with the study of adult learners in a School of Education (Londoner, Linder, Bauer, 1985). The present study extends the earlier work by describing the relationships between LOC and Value Orientations of adult learners in both Schools of Business and Education in a large urban university.

Specifically, the following research questions guided this study:

1. What are the LOC orientations of adult learners in Schools of Business and Education and do older adult learners display a more internal orientation than younger ones?

2. Do males and females within and between Schools of Business and Education display different LOC orientations?

3. What are the value orientations of male and female adult learners within Schools of Business and Education and do the value priorities of older adult learners differ from younger ones?

4. Do males and females of all ages display different value priorities between Schools of Business and Education?

5. What is the relationship that exists between sex, age, LOC and values of adult learners in Schools of Business and Education?

## METHOD

Adult learners enrolled in Business and Education programs at Virginia Commonwealth University during the 1983-1985 academic years were the subjects of this study. They ranged in age from 18 to over 40. There were 413 subjects (337 females, 76 males) in the School of Education sample and 726 (422 females, 304 males) in the School of Business sample.

Rotter's (1966) Internal-External Locus of Control Scale was used. It consists of 23 question pairs within a forced-choice format plus six filler questions. The I-E Scale has been judged appropriate for use with college educated adult subjects (Lefcourt, 1981).

The second instrument used was Rokeach's (1973) Value Survey. This consists of 18 alphabetically listed terminal and instrumental values on separate pages. Subjects rank order each list of values according to the relative importance of each value to themselves.

A three-part survey comprising demographic data plus the two instruments was given to faculty to distribute to their classes. Part I asked information concerning subjects' age, sex, marital status, work, and major. Part II consisted of Rotter's I-E Scale and Part III included Rokeach's Value Survey (Form D). Subjects took the questionnaires home, completed and returned them via self-addressed envelopes. A 54% and 50% rate of response was obtained from the Schools of Business and Education, respectively.

## RESULTS AND DISCUSSION

Table 1 displays the data for questions one and two concerning LOC orientations, age and sex. On Rotter's I-E scale, the lower the score the more internally oriented a subject is.

In most studies, a mean score below 8.5 is considered an internal orientation on an I-E scale that ranges from 1-23 (Lefcourt, 1982). In this sample older adult learners in both schools displayed descending mean scores. Note that the older three age groups in Education are more internally oriented as compared to Business students. These results are consistent with Knoop (1981) and Londoner, et. al. (1985). An overall computed ANOVA showed that the age difference remained statistically significant [F(4, 1116) = 9.01, $p < .0001$)]. The data also showed that males in both schools were more internally oriented than females. Similar trend results showing males being more internally oriented was reported by McNeil and Jacobs (1980) and Londoner, et. al. (1985).

**Table 1. Descriptive Statistics for Locus of Control Scores by Age and Sex, for Each School**

| | School of Business | | | School of Education | | |
|---|---|---|---|---|---|---|
| **Age** | **N** | **Mean** | **SD** | **N** | **Mean** | **SD** |
| 18-22 | 326 | 10.42 | 4.22 | 100 | 10.69 | 4.17 |
| 23-29 | 224 | 9.04 | 4.35 | 107 | 8.79 | 3.89 |
| 30-34 | 93 | 9.16 | 4.18 | 70 | 8.40 | 3.98 |
| 35-39 | 48 | 8.60 | 4.16 | 56 | 8.30 | 3.81 |
| 40+ | 32 | 6.53 | 3.61 | 80 | 7.90 | 3.73 |
| | F(4,713) = 8.24<br>P = .0001 | | | F(4,403) = 3.39<br>P = .0097 | | |
| **Sex** | **N** | **Mean** | **SD** | **N** | **Mean** | **SD** |
| Male | 304 | 8.66 | 4.37 | 76 | 7.82 | 3.50 |
| Female | 422 | 10.08 | 4.18 | 337 | 9.20 | 4.12 |
| | F(1,713) = 15.44<br>P = .0001 | | | F(1,403) = 3.20<br>P = .0743 | | |

Question three addressed the value priorities of adult learners in both schools and asked if the value priorities of older adult learners differed from the younger ones. Question four asked whether or not the sexes have different value priorities. Results from a multivariate analysis of variance for these questions for the School of Business showed some statistically significant differences. The most highly ranked terminal values for the School of Business were "Self-Respect," "Happiness," "Freedom," and "Family Security." "Self-Respect" was ranked as the number one value priority with significant sex and age main effects ($p = .011$, $p = .002$, respectively) as well as interaction ($p = .038$). "Happiness" was ranked second with a significant age main effect ($p = .001$). The oldest age group ranked eighth in importance while the younger age groups rated it either first or second in importance. "Freedom" and "Family Security" were ranked third and fourth, respectively, with no significant age, sex, or interaction effects.

There were several significant trends across all age categories for both sexes for the instrumental values. The most highly ranked instrumental values for the School of Business students were "Honest," "Responsible," "Loving," and "Independent." "Honest" was ranked first with no significant differences between age groups and sexes. That is, all adult learners in the School of Business, regardless of age and sex, perceived this value similarly. "Responsible" was the second most important value with a significant sex main effect. Females considered "Responsible" as relatively more important that did males (Females, M = 5.78; Males, = 6.01, $p < .047$). "Loving" was ranked third with a significant sex difference. Females ranked it third and males ranked it fourth (Females, M = 6.63; Males, M = 8.12, $p = .001$). "Independent" was ranked fourth and there were no significant age or sex main effects.

The two-way Analysis of Variance data for the terminal and instrumental values for subjects within the School of Education revealed some similar trends to the School of Business data. The most highly ranked terminal values for School of Education subjects were "Self-Respect," "Family Security," "Freedom," and "Happiness." "Self-Respect" was ranked as the most important value by both sexes and all age groups. "Family Security," was ranked second with a significant age main effect ($p < .003$). The oldest age group in the School of Education ranked "Family Security" as more important than the younger age groups. "Freedom" was the third most important value and "Happiness" was fourth with no significant main effects.

The highest ranked instrumental values for School of Education students were "Honest," "Responsible," "Loving," and "Independent." There were no significant differences between the sexes or age groups for "Honest" or "Responsible," indicating that males and females and all ages viewed these values similarly. There were significant main effects and interaction for the value "Loving" (sex, $p < .001$; age, $p < .004$; sex x age, $p < .024$). There was a significant sex main effect obtained for the value "Independent." Females gave "Independent" a higher priority than males.

Question four asked what differences were obtained for males and females across all ages between Schools. Table 2 displays the mean ranks for terminal and instrumental values and levels of probability from the three-way ANOVA by sex, age, school, and interaction as responses to question four.

Table 2. Mean Ranks for Values, and P-Values from Analysis of Variance for Sex, Age, School and Interactions, Controlling for All Other Effects.

| Terminal Value | Business Mean Rank | Business Rank of Value | Education Mean Rank | Education Rank of Value | P-value for Sex | P-value for Age | P-value for School | Interaction Present | Instrumental Value | Business Mean Rank | Business Rank of Value | Education Mean Rank | Education Rank of Value | P-value for Sex | P-value for Age | P-value for School | Interaction Present |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A Comfortable Life | 9.09 | (10) | 10.88 | (13) | .010 | ..050 | .079 | | Ambitious | 7.53 | ( 5) | 10.05 | (11) | .093 | .193 | .000 | |
| An Exciting Life | 11.08 | (13) | 12.[illegible] | (14) | .009 | .178 | .561 | | Broadminded | 8.68 | ( 7) | 8.60 | ( 7) | .039 | .907 | .383 | |
| Sense of Accomplishment | 8.43 | ( 8) | 8.[illegible] | ( 9) | .103 | .002 | .443 | | Capable | 8.33 | ( 6) | 8.56 | ( 6) | .593 | .000 | .064 | |
| A World of Peace | 10.39 | (11) | 9.[illegible] | (10) | .077 | .472 | .043 | | Cheerful | 10.34 | (13) | 10.41 | (13) | .006 | .864 | .146 | |
| A World of Beauty | 13.84 | (18) | 12.77 | (16) | .128 | .908 | .025 | SA(.014) | Clean | 12.41 | (17) | 12.93 | (17) | .031 | .007 | .769 | |
| Equality | 11.51 | (14) | 10.38 | (12) | .000 | .053 | .070 | | Courageous | 10.22 | (12) | 10.26 | (12) | .508 | .183 | .636 | |
| Family Security | 6.63 | ( 4) | 6.19 | ( 2) | .660 | .007 | .281 | | Forgiving | 9.80 | ( 9) | 8.97 | ( 8) | .007 | .019 | .439 | |
| Freedom | 6.60 | ( 3) | 7.13 | ( 3) | .384 | .328 | .328 | | Helpful | 10.17 | (11) | 8.45 | ( 5) | .968 | .514 | .000 | |
| Happiness | 6.27 | ( 2) | 7.16 | ( 4) | .064 | .001 | .056 | | Honest | 4.71 | ( 1) | 4.98 | ( 1) | .147 | .266 | .028 | |
| Inner Harmony | 8.24 | ( 6) | 7.58 | ( 6) | .049 | .005 | .810 | AC(.048) | Imaginative | 12.25 | (16) | 11.51 | (16) | .020 | .099 | .566 | |
| Mature Love | 8.40 | ( 7) | 8.46 | ( 8) | .383 | .093 | .858 | | Independent | 7.48 | ( 4) | 8.14 | ( 4) | .018 | .171 | .004 | |
| National Security | 12.69 | (16) | 12.75 | (15) | .678 | .017 | .200 | | Intellectual | 9.18 | ( 8) | 9.11 | ( 9) | .703 | .001 | .338 | SC(.033) |
| Pleasure | 11.[illegible] | (15) | 13.15 | (17) | .104 | .000 | .166 | | Logical | 10.58 | (14) | 10.94 | (14) | .000 | .006 | .523 | |
| Salvation | 10.58 | (12) | 10.33 | (11) | .335 | .036 | .808 | | Loving | 7.26 | ( 3) | 6.26 | ( 3) | .000 | .008 | .252 | SAC(.022) |
| Self-Respect | 5.98 | ( 1) | 5.38 | ( 1) | .015 | .109 | .741 | | Obedient | 14.97 | (18) | 14.97 | (18) | .029 | .000 | .004 | |
| Social Recognition | 12.96 | (17) | 13.65 | (18) | .004 | .947 | .214 | | Polite | 11.21 | (15) | 11.28 | (15) | .998 | .006 | .068 | AC(.033) |
| True Friendship | 7.83 | ( 5) | 7.54 | ( 5) | .020 | .000 | .269 | SA(.045) | Responsible | 5.84 | ( 2) | 5.77 | ( 2) | .403 | .575 | .440 | |
| Wisdom | 8.67 | ( 9) | 8.07 | ( 7) | .017 | .006 | .305 | | Self-Controlled | 10.04 | (10) | 9.80 | (10) | .000 | .420 | .096 | SAC(.036) |

Note that subjects within the two schools apparently viewed the top ranked terminal and instrumental values alomst identically. The major differences are between the sexes and age groups. Only a few between school differences were noted. Thus, for these samples, professional curriculum does not account for major differences while age and sex do account for the differences in the perceived importance of the values. This finding is consistent with Londoner, Linder and Bauer (1985).

Question five asked what relationship existed between sex, age, LOC and values of adult learners within and between the two schools. Table 3 displays the partial correlations of terminal value rankings with LOC scores controlled for age and sex by school. A positive correlation indicated that the more internal one was the more one tended to subscribe to that value. Negative correlations mean that the more external one was the more one subscribed to that value.

The data showed that more internally oriented persons within the School of Business significantly valued "A Sense of Accomplishment," "A World of Peace," "Equality," "National Security," "Wisdom," and "Self-Respect." Internally oriented students in Education valued "Self-Respect," "Wisdom," "Freedom," and "A Sense of Accomplishment." The *p* values, although not statistically significant, indicated a trend toward a positive relationship between LOC and these terminal values. It is interesting to note that internally oriented students in both schools valued "A Sense of Accomplishment," "Self-Respect," and "Wisdom." However, the relationship between LOC scores and these values are more significant for the Business students.

Table 3. Partial Correlations of Terminal Value Rankings with Locus of Control Scores Controlling for Age and Sex: By School.

| School of Business Value | Partial Correlation | P-Value | School of Education Value | Partial Correlation | P-Value |
|---|---|---|---|---|---|
| Sense of Accomplishment | .083 | .007 | Self-Respect | .071 | .064 |
| A World of Peace | .080 | .021 | Wisdom | .069 | .086 |
| Equality | .068 | .035 | Freedom | .062 | .094 |
| National Security | .063 | .053 | Sense of Accomplishment | .060 | .100 |
| Wisdom | .061 | .053 | A World of Beauty | .048 | .198 |
| Self-Respect | .058 | .054 | True Friendship | .026 | .529 |
| Freedom | .048 | .126 | Inner Harmony | .024 | .491 |
| Inner Harmony | .006 | .845 | Equality | .020 | .598 |
| Salvation | .005 | .882 | Mature Love | .018 | .631 |
| Happiness | -.006 | .845 | Social Recognition | .009 | .821 |
| A World of Beauty | -.013 | .664 | An Exciting Life | -.009 | .814 |
| Social Recognition | -.019 | .548 | A World of Peace | -.010 | .785 |
| True Friendship | -.030 | .324 | Happiness | -.019 | .631 |
| An Exciting Life | -.048 | .137 | Pleasure | -.029 | .454 |
| Family Security | -.054 | .090 | Salvation | -.042 | .278 |
| A Comfortable Life | -.072 | .026 | National Security | -.047 | .212 |
| Mature Love | -.094 | .002 | A Comfortable Life | -.071 | .064 |
| Pleasure | -.123 | .000 | Family Security | -.077 | .048 |

Table 4 displays the partial correlations for the instrumental value rankings with LOC scores controlled for age and sex by school. "Ambitious" was significantly related to internally oriented business students. Not surprisingly for business oriented persons, "Broadminded," "Responsible," and "Capable" began to approach a statistically positive correlation. Internally oriented education students valued "Intellectual," "Logical," "Polite," "Honest," "Ambitious," and "Independent" modes of behavior. This trend is consistent with prior research portraying internally oriented persons as competent and intellectual (Crandall and Crandall, 1983). Thus, while the top terminal values were similar, the perceived ways for attaining these valued outcomes appear to differ for internally oriented persons in the two professional schools.

Table 4. Partial Correlations of Instrumental Value Rankings with Locus of Control Scores Controlling for Age and Sex: By School.

| School of Business | | | School of Education | | |
|---|---|---|---|---|---|
| Value | Partial Correlation | P-Value | Value | Partial Correlation | P-Value |
| Ambitious | .101 | .001 | Intellectual | .055 | .168 |
| Broadminded | .056 | .089 | Logical | .038 | .350 |
| Responsible | .049 | .112 | Polite | .037 | .338 |
| Capable | .049 | .118 | Honest | .021 | .580 |
| Intellectual | .034 | .263 | Ambitious | .017 | .655 |
| Logical | .028 | .377 | Imaginative | .015 | .695 |
| Imaginative | .027 | .398 | Independent | .010 | .800 |
| Courageous | .020 | .522 | Courageous | .008 | .824 |
| Independent | .003 | .924 | Responsible | .005 | .902 |
| Self-Controlled | .002 | .939 | Loving | -.002 | .952 |
| Honest | -.002 | .951 | Capable | -.007 | .850 |
| Helpful | -.006 | .844 | Forgiving | -.018 | .640 |
| Forgiving | -.015 | .659 | Self-Controlled | -.021 | .583 |
| Cheerful | -.023 | .520 | Obedient | -.023 | .555 |
| Obedient | -.021 | .493 | Clean | -.025 | .509 |
| Loving | -.053 | .071 | Helpful | -.035 | .386 |
| Polite | -.080 | .012 | Broadminded | -.040 | .311 |
| Clean | -.101 | .001 | Cheerful | -.105 | .006 |

## CONCLUSIONS

Significant differences between the oldest and younger age groups as well as the sexes was noted. This suggests that faculty should offer more independent self-directed learning experiences for internally oriented older adult learners. The value "Self-Respect," was the number one ranked terminal value for learners in both schools. Faculty should be aware that student self-respect or self-esteem is related to motivation and academic achievement. Faculty need to be aware of older adult learner LOC and value orientations. Adult learners should be offered learning experiences that provide a "Sense of Accomplishment" which, in the present study, was significantly correlated with an internal LOC. Significant differences between the Schools indicated that adult learners in Business gave higher priority to the value "Ambitious" and lower priority to the value "Helpful." The differences flip-flopped for the Education adult learners who gave higher priority to being helpful. Business faculty might try using cooperative goal structuring classroom strategies that faciliate the helping behaviors of their students while still maintaining intergroup competition. Education faculty may find that individual goal structuring techniques may give Education students more risk-taking experiences and the chance to be innovative.

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# A DESCRIPTIVE STUDY OF THE USE OF A NEGOTIATED PROCESS APPROACH IN HEALTH CARE TEAM-COMMUNITY GROUP INTERACTIONS

Joan S. Reeves, R.N., M.S.[1]

## Abstract

Findings are presented from a descriptive case study of the interactions between a health team and a lay community group when they utilize a specified practice model (Negotiated Process Approach) within a Primary Health Care framework to solve community health problems. Study conclusions support the utility of this approach to manage the typical conflicts which occur when these two groups work together. Through the use of a process consultant, who promotes shared process control and guides structured interactions, knowledge is exchanged and used by both groups in each stage of the assessment, planning, implementation, and evaluation process.

## INTRODUCTION

In the summer of 1984, a faculty group developed an inter-professional course in Women's Health using a Primary Health Care (PHC) approach as defined by the World Health Organization (1978). A major goal for the course was to develop an alternative practice model or approach utilizing an interprofessional health team based on PHC concepts to meet health needs of urban women in an industrialized country. One of the course objectives was to teach health professional students to function as an interdisciplinary team in working with a group of community women. Since women carry the major responsibility for health care of families and communities, the faculty wanted to find a practice model which would be useful in an intergroup situation and would be supportive of community women working with a group of health professionals. The exploratory work in 1984 led to the empirical development of the Negotiated Process Approach (NPA) which was used in the summer of 1985 in the Women's Health course field experience. This course is more fully described in another paper (Dan, et al., 1985).

In reviewing literature from the United States, the author found no discussions of interactions between an interdisciplinary, multidisciplinary health care team and a community group. In studying other interactions (not intergroup) between single health professionals and community groups, there is a history of conflict, problems of power and control, problems with community participation and problems with differences in knowledge (Geiger, 1974). No appropriate practice model could be found for use between two groups (a health care team and a community group); therefore, the NPA was developed by combining the philosophy and principles of PHC with generally accepted approaches in women's health. The NPA also utilizes information about group dynamics for the development of each group and the intergroup interactions.

The NPA was designed to be used in any situation where it is important for the professional health care team and lay community group to interact directly. The NPA is designed to foster shared control, satisfaction by both groups with the process and health activity, as well as promoting increased community involvement. A central focus of this approach is the use of negotiation as a method for managing conflict between groups.

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This Negotiated Process Approach is not theoretical but is adapted from practice models or treatment models. The treatment model, as described by Reid and Epstein (1972), is descriptive and prescriptive rather than analytic and is used to guide the practitioner. It typically answers the question of "what" and "how" but not "why." The questions of "why" typically relate to theories or concepts and assumptions supporting the model. The model is also supported by an empirical base of data and by value premises. The empirical base relates to information that is collected through the use of the model. Value premises are typically stated without much specification separately or included within assumptions and/or principles. Besides values, assumptions, and principles, the underlying bases of practice models generally include guiding hypotheses, theories, or concepts. A practice model itself generally would include goals, target population, strategies, techniques, and roles, which are presented as "descriptive and definitional" (Reid & Epstein, 1972; Andrews & Norton).

The practice model is typically used by health professionals but has also been adapted for use with lay people, both individually and in groups. An example of this type of model would be nominal group process which is frequently used within a single group (Delbecq & Van de Ven, 1971). Another example is the Neighborhood Self Help Model which was developed through the Taylor Institute for Policy Studies (Andrews & Norton) and in the field of nursing, the nursing process (Griffith & Christensen, 1982).

## THE NEGOTIATED PROCESS APPROACH

The NPA was developed to be used in interactions between an interdisciplinary and multidisciplinary health care team and a lay community group in moving through the stages of assessment, planning, developing strategies, implementation, and evaluation. The underlying bases selected for the NPA consist of assumptions, guiding principles and a conceptual framework. The principles of the NPA are based on principles within PHC and from the empirical development of the model. The health care team and community group are both taught these principles and are encouraged to follow them. The model itself is composed of ten basic components which include the overall goal and descriptions of terms which are used in defining the prescribed interactions between a health professional group and a community group (See below).

The concepts fit together to form a conceptual framework that is used in the NPA. The four concepts are: 1) community participation, 2) negotiation, 3) process stages, and 4) lay knowledge and professional knowledge.

1. Community participation: The NPA promotes influential participation which is defined as shared influence between the groups in determining the content of a decision, plan or solution, although members may not equally influence the decision. This definition rests on participants being both offered and provided with opportunities to influence the process and the decision. In research on community participation, the key point seems to be the feeling of influence for the participant (Appleby, 1980).

2. Negotiation: A series of negotiations were chosen as the primary approach in managing conflict. This model is not based on conflict resolution but seeks to recognize differences, which are then used to enhance interactions and manage conflicts. By allowing the two groups to consciously utilize negotiation as a part of each stage in the interactions, there is the promotion of knowledge exchange and a tendency to progress toward an agreement regarding activities to be implemented.

With the NPA, the differences in the two groups are emphasized and then as the groups move toward an outcome, these differences narrow. This is accomplished in each stage of the process by the two groups meeting separately and then meeting together. Both groups are taught to use the method of principled negotiation (Fisher & Ury, 1981).

3. Process Stages: There are five process stages which begin after there is an initial decision for the two groups to collaborate and a separate educational session for each group. The process stages are assessment, planning, strategy development, implementation, and evaluation. It is important for the stages to be carried out in sequence because the outputs from one stage provide the inputs for the next stage. However, the groups may recycle by returning to an earlier stage.

4. Lay Knowledge and Professional Knowledge: There are several properties of knowledge which may be used to compare lay knowledge with professional knowledge. The professional's knowledge may be characterized as being very narrow, but highly concentrated and in greater depth than the lay person's knowledge (Hayes-Bautista, 1978). The professional uses processed knowledge for acquiring new knowledge about reality; whereas, the lay person has an intimate knowledge of the context (Friedman, 1976). This means that the professional is more likely to use statistical data, like mortality rates, whereas the lay person knows about people who have died in the community. Discrepancies in knowledge are recognized through interactions between the professional group and lay group and are managed through the process of negotiation. Through knowledge exchange, the participating community group learns more about the special knowledge of the professional group and the professional group leans more about the perceived needs and knowledge of the community group.

## Components Of The Model

The model is composed of the following ten basic components:

- Overall goal
- Collaboration
- Education
- Structured intergroup interactions
- Process consultation
- Negotiated agreements
- Joint decisions
- Joint participation
- Health activities
- Joint evaluation

In the NPA each component is described; however, in this paper only summary statements about the components are provided. The NPA begins by the health care team and community group agreeing that they will collaborate on an overall goal of working together on some undefined community health activity. The health care team and community group will have educational activities planned before they begin interacting. These activities will include information on the PHC, the NPA, principles of negotiation, and information on group dynamics. Skill activities will include simulated negotiations and team building. The use of a process consultant is extremely important in providing information about group dynamics, teaching principled negotiation, and in helping to maintain the structured intergroup interactions. The process consultant maintains a role independent from the two groups and is available to both groups throughout the process.

Through the structured intergroup interactions, the two groups jointly participate and reach joint decisions through negotiated agreements. They agree upon a health activity which is then implemented and which the two groups jointly evaluate. They also evaluate the process of working together.

## THE DESCRIPTIVE STUDY

In the summer of 1985 the Women's Health course provided the opportunity for the observation of the interactions between a health care team (student team) and a Latina women's community group as they utilized the NPA. The study focused on the nature of relations between the two groups. The dynamics of primary interest were: (1) the process of interaction between the groups and the changes which occurred from week to week, (2) communication patterns, (3) member perceptions of their own group's effectiveness and the intergroup's effectiveness as they worked together, (4) conflict management, and (5) ways in which mutual agreements were reached.

Data for this study were collected through observation, audiotaping meetings, Bales interaction analysis, an activity level analysis, a group effectiveness scale and an agreement analysis.

The implementation of the NPA also was described and evaluated in this study. The focus of the evaluation was on (1) the group's satisfaction with the process and the health activity, (2) "shared control" over the interaction process, (3) knowledge exchange, and (4) determining if the health activity was supportive of community self-reliance.

## Findings

Findings from the study of the interactions between the student team and community group indicate that: (1) both of the groups and the intergroup effectiveness were rated by members as increasing over the seven interaction periods, (2) members saw conflict as being managed within their own group and in the intergroup interactions, (3) both groups maintained a separate identity, (4) groups were able to negotiate agreements and move to the next stage of the process, (5) information was exchanged which was based on professional and lay knowledge orientations, and (6) the creation of influential community participation was important in creating perceptions of "shared control" over the interaction process. In five out of seven of the interaction sessions, the student health team spoke more to the intergroup than did the lay group. This communication pattern is related to the group members who took on leadership roles in which they were giving and asking for information. These findings indicate that even with the NPA there is a tendency for leadership to come from the health care team which can influence feelings of "shared control".

## Conclusions and Implications

With the current interest in PHC, there is need for further intergroup research between health care teams and community groups. Since the NPA is a practice model, the validity of the usefulness of this approach can only be determined through a variety of field experiences under different conditions.

The NPA appeared to empower community groups through the educational component for both groups and through the process of strengthening each group by allowing them to work separately as well as together in intergroup sessions. The use of a process consultant, who is not a member of either group, provides a mechanism for promoting successful intergroup interactions which is reflected in the member's feelings of satisfaction and the belief that conflicts were managed successfully.

In summary, a student health care team and a community women's group were able to use the NPA and were able to implement a health related activity in spite of the cultural and situational difficulties which were encountered during the field experience. Satisfaction with the NPA was expressed by both groups, and members of the student health team believed that they could use this approach in their future practice.

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# ADULT EXPERIENTIAL LEARNING: A GRASPING AND TRANSFORMING PROCESS

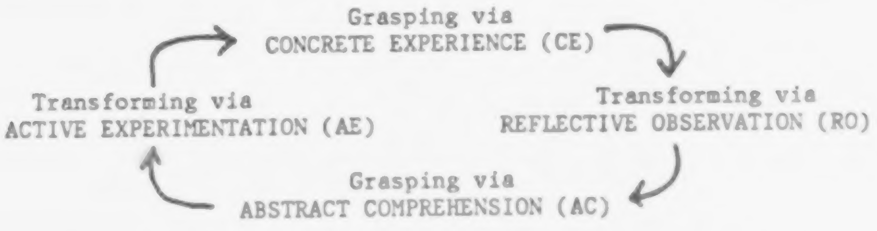
Barry G. Sheckley[1]

## Abstract

Experiential learning theory (ELT), formulated by Kolb (1984), has important implications for designing adult learning programs. ELT depicts learning as a process whereby information is "grasped" through concrete experience (CE) or abstract conceptualization (AC) and then "transformed" via reflective observation (RO) or active experimentation (AE). This perspective (a) suggests that learning is a continuous refinement of experience, (b) depicts learning styles as habits of characteristic preferences for "grasping" and "transforming" experiences, and (c) outlines a developmental process in which learning moves from fundamental information acquisition through adaptive specialization of knowledge to higher order integration. The theory also provides an excellent curricular model for adult programs.

David Kolb's (1984) comprehensive exposition of experiential learning theory (ELT) is a rich framework that depicts learning as an active process of grasping and transforming information. It captures Mezirow's (1985) insightful analysis that adult learning is more a process of "perspective transformation" than a practice of just learning new facts. Roots of ELT exist in Dewey's (1938) insight that learning is a dialectic process integrating experience and concepts, Lewin's (1951) perspective that learning derives from here-and-now experiences cycled through feedback loops, and Piaget's (1951) analysis that learning involves accommodating concepts to experience and assimilating experience into concepts. Kolb (1984) synthesizes these ideas to argue that learning involves two processes whereby ideas and skills are "grasped" through concrete experiences (CE) or abstract concepts (AC) and then "transformed" through reflective observation (RO) or active experimentation (AE) (Figure 1).

Figure 1. Experiential Learning Cycle (Kolb, 1984)


Grasping via
CONCRETE EXPERIENCE (CE)
Transforming via
ACTIVE EXPERIMENTATION (AE)
Transforming via
REFLECTIVE OBSERVATION (RO)
Grasping via
ABSTRACT COMPREHENSION (AC)

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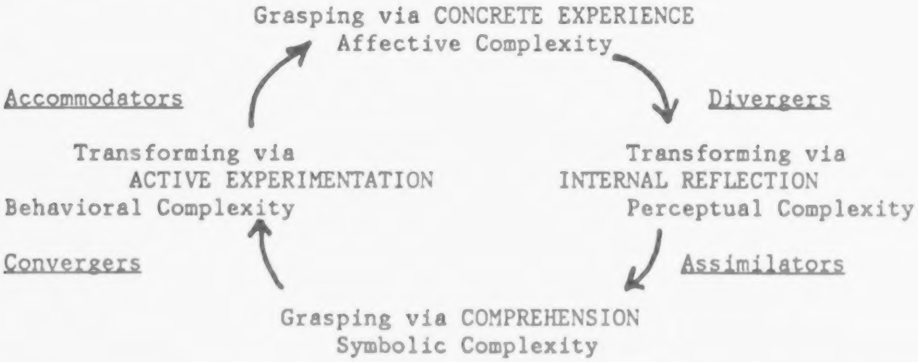
The grasping dimension describes how adults get information either through specific apprehension of concrete events (CE) or through detached comprehension of symbols and abstract concepts (AC). Apprehended sensations, like eating a chocolate torte, are known instantaneously without need for rational inquiry or analytical confirmation. Comprehensions provide symbolic representations of the world, summarize and order apprehended sensations and enable communication of experiences. Recent research on left-brain and right-brain functions suggest "...that the two hemispheres of the brain were specialized for...the two different modes of knowing about the world we are calling apprehension [CE] and comprehension [AC]" (Kolb, 1984, p.48). While modern educational tendencies embrace comprehension and view subjective apprehension suspiciously, the experiential learning framework emphasizes both complementary processes as essential for learning.

The transforming dimension describes how information is personalized through reflective observations (RO) or active experimentation (AE). Like the CE-AC duality of grasping, the transformation processes are co-equal partners in learning. "Learning...occurs through the active extension and grounding of ideas and experiences in the external world and through internal reflection about the attributes of these experiences and ideas" (Kolb, 1984, p. 52). ELT shifts emphases of adult learning programs from memorizing a body of knowledge to honing the grasping and transforming skills needed to assimilate experience into theory and accommodate theory to experience.

## Learning Styles as Habitual Individual Differences

The active process of learning allows for individualized patterns of grasping and transforming that Kolb (1984) termed "learning styles." Individuals who characteristically grasp via CE and transform via RO are called "divergers". Sensitive to feelings and values, these learners imagine implications, like ambiguous situations and possess excellent brainstorming and valuing skills. "Assimilators" grasp via AE and transform via RO. Their preference for organizing information, building conceptual models, and testing ideas is seen in highly developed problem analyzing and thinking skills. Individuals who tend to grasp via AC and transform via AE (i.e.,"convergers") excel at creating new ways of thinking and doing, analyzing solutions and making decisions. By grasping the world via CE and transforming it via AE, "accommodators" seek and exploit opportunities, become personally involved, and have highly developed implementation and acting skills.

Figure 2. Learning Styles as Grasping-Transforming Preferences



Adaptation to the world requires a diverger's valuing skills, an accommodator's thinking skills, a converger's deciding skills and an accommodator's acting skills. A learning style represents a skilled preference for one adaptive mode. It is a habit of partial learning because only selected grasping and transforming processes (e.g., RO and AC) are used while others (e.g., AE and CE) are ignored.

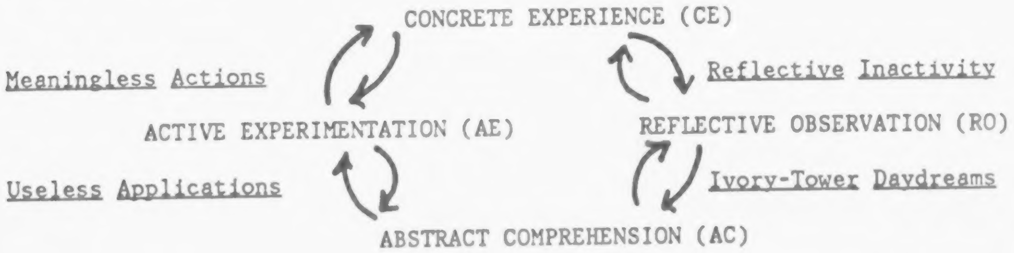
Curricula that emphasize one particular learning style facilitate rapid acquisition and use of information appropriate to that grasping and transforming process. For example, instruction emphasizing only reflection and comprehension would develop skilled thinkers. However, to develop adaptive, flexible learners, curricula must emphasize valuing, deciding, acting, and thinking skills. Kolb and Fry (1975) argue for learning environments where the purpose of major activities are modulated to provide educational programs which have affective, perceptual, behavioral and symbolic complexity.

## Development and Rigidity In Learning Styles

Classical views of learning have emphasized behavioral outcomes or changes (Hilgard and Bower, 1966). This perspective does not address the integrative development which Kolb (1984) posits as the major challenge of lifelong learning. According to ELT, developmental growth is accompanied by increasing behavioral, symbolic, affective, and perceptual complexity. At lower levels, individuals habitually tend to use a predominant learning style to acquire basic information . At higher levels, individuals integrate the learning skills of valuing, perceiving, thinking or acting appropriately in differing situations.

Within ELT, effective human adaptation assumes a fluid and dialectic tension between the poles of both grasping and transforming. Individuals who have overdeveloped one particular learning style to the exclusion of others find themselves caught in spirals of escalating rigidity. The specific form this rigidity takes reflects the dominant learning style (Figure 3). Thus, the diverger's reflective observation that is not leavened with the risk taking of active experimentation yields the stagnating preoccupations of Winnie-the-Pooh's friend Eeyore who muses about a lost tail but does nothing to find it. Conversely, the accommodator's action without the orienting wisdom of self-reflective observation promotes the acontextual activity of Lewis Carroll's Mad Hatter. In a similar manner, the converger's ultimate rigidity is manifest in Fred MacMurray's fascination with "flubber" in Walt Disney's *The Absent Minded Professor* while the overdeveloped assimilator disappears in a Walter Mitty world of "ivory tower" dreams and idle fantasies. Uni-dimensional educational curricula can have the untoward side effect of catalyzing such rigidities.

Figure 3. Consequences of Overdeveloped Learning Styles



When learning is treated exclusively as information acquisition, important developmental processes do not occur. ELT suggests that adult learning programs should concentrate as much on modifying and disposing old ideas and habits as on implanting new ones. Since adults display rigidity in learning habits, adult programs necessarily involve two processes: (a) integrating new ideas, facts and concepts into working theories; and, (b) substituting new concepts for established ones. Adult education can overcome resistance caused by conflicts with old beliefs and learning habits by bringing out the learner's beliefs and theories, examining and testing them, and then integrating more refined ideas into the person's belief systems.

## Curriculum Design

Following Kolb (1984), adult learning programs and component courses should begin with concrete experiences (CE) which are transformed by reflective observations (RO) to form abstract concepts (AC) which, in turn, should be tested out through active experimentation (AE). The relative mix of these four processes in a curriculum will vary with the background and prior experience of learners (Figure 4). When adults have little experience in a field (like business), and have little experience with course content (like management theories) the course should strongly emphasize grasping fundamental information and skills (Low/Low combination). In cases where the participants have a few years of quality experience in an occupation (like counseling) and have a working understanding of a specialty (like family counseling), courses should balance the emphasis on grasping new theories (like therapeutic double bind strategies) with equally important reflections on why or how they should be used (Medium/Medium combination).

Figure 4: Relative grasping and transforming emphases for learners with differing amounts of experience related to curriculum content.

| | RELATED LIFE OR JOB EXPERIENCE | | |
|---|---|---|---|
| SPECIFIC EXPERIENCE | LOW | MEDIUM | HIGH |
| LOW | 90% GRASPING<br>10% TRANSFORMING | 85% GRASPING<br>15% TRANSFORMING | 70% GRASPING<br>30% TRANSFORMING |
| MEDIUM | 60% GRASPING<br>40% TRANSFORMING | 50% GRASPING<br>50% TRANSFORMING | 40% GRASPING<br>60% TRANSFORMING |
| HIGH | 30% GRASPING<br>70% TRANSFORMING | 15% GRASPING<br>85% TRANSFORMING | 10% GRASPING<br>90% TRANSFORMING |

Adult learners with many years of high quality experience in an occupation and with sound knowledge of the course material present a difficult problem for usual curriculum designs. For example, faculty with many years of instructional experience would benefit most from a course on teaching adult learners if it helped them understand their own assumptions about the teaching-learning process and allowed them to experiment with new teaching methods rather than requiring memorization of 75 research studies (High/High combination).

There are also times when adults are highly experienced in a profession (like teaching) but have little experience with a new technique (like using computers). In this situation, instruction on using computers would initially emphasize grasping over transforming (HIGH/LOW combination). Conversely, when an individual is highly knowledgeable in a specialty area (like computers) but has little experience in a profession (like teaching), a course on computers for this new teacher would best emphasize experimentation in a new area over grasping basic information (LOW/HIGH combination).

Unfortunately, too many adult learning programs use the LOW/LOW model by placing primary emphases on learning (grasping) a "body of knowledge". When experienced adult learners are involved, an exclusive focus on information acquisition is not always appropriate. If development is to be the major outcome of adult learning programs (Chickering, 1981; Mezirow, 1985) program designs have to shift to lower right corner of Figure 1. To do so, adult programs need to be based on a broader definition of adult experiential learning as a grasping AND transforming process.

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# QUALITATIVE EVALUATION RESEARCH: ISSUES AND DILEMMAS

Arlene Fingeret[1]

## Abstract

North Carolina conducted a qualitative, statewide ABE program evaluation to provide information that would help improve the effectiveness of the ABE instructional program. Open-ended interviews and observation were the major data collection methods, supplemented by examination of written records, publications and descriptive numerical data. This paper focuses on the methodological and ethical issues that arose throughout the project rather than on the findings and conclusions.

## INTRODUCTION

North Carolina conducted a qualitative, statewide Adult Basic Education (ABE) program evaluation between 1981 and 1983. The major purpose of the evaluation, derived from the input of numerous stakeholders during a planning year, was to provide information that would help improve the effectiveness of the ABE instructional program. Thus, the study focused on perspectives and interaction relevant specifically to instruction, and on programs designed to serve adults whose reading and math skills are classified as lower than ninth grade level. In-depth open-ended interviews and observation were the major data collection methods, supplemented by examination of written records, publications and descriptive numerical data. Six program sites were chosen initially; the final sample included 91 students, 36 instructors, and 25 administrative personnel from eight ABE programs including 25 different class sites.

This paper focuses on the methodological, political, logistical and ethical issues that arose throughout the project rather than on the findings and conclusions. Many researchers shy away from qualitative evaluation research because of the complex issues raised. Clearly, there is no definitive resolution to these issues, but a discussion of our responses in this project may assist other researchers to use this powerful research approach with more confidence.

## PLANNING AND FIRST STAGE

The study was initiated with a planning grant funded by the N.C. Department of Community Colleges as a 310 special project in 1982-83, followed by an evaluation project grant in 1983-84. ABE directors identified a group of persons including directors, deans, presidents, community contacts, instructors and others as "stakeholders" in the ABE program. This group responded to a series of questionnaires and letters and during fall, 1983, an initial design was tested at a local technical college. The results of the pilot study were used to revise the interview and observation guides and to refine the study's major questions.

In December, 1983, we identified six programs that would serve as the primary case study sites. They were chosen to represent rural as well as urban population areas; mountain, piedmont and coastal geographic distribution; small, medium and large previous student enrollment; broad as well as narrow community linkages; and ABE directors who had been in their positions at least one year. Each ABE director was asked to identify someone familiar with the program as well as with the larger community context who would be willing to serve as a local member of the research team.

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We began with three sites. Three teams of two university graduate students each were created. Each team was assigned to a site and was responsible for integrating their local team member. We came to believe that the local member's commitment to the project was crucial for securing the cooperation of the students, community members and program personnel. The local team members were responsible for identifying the initial informants for the study and for providing background information on the larger community context.

We found that the local team members tended to begin their involvement with some ambivalence. On the one hand, they felt positively toward this research approach in which people sit down and talk to each other. They were proud to be connected to the project and genuinely believed that there was the potential to develop useful insights. On the other hand, they were uncomfortable at first dealing with "university people" and this discomfort was aggravated by their perception of the researchers as representatives of the state office. The first task of the university research team, therefore, was to develop "rapport" with the local team member and to collaborate to design data collection at each site.

Since the local team member also was connected to the ABE program, often there were conversations among the research team in which the local member offered information, insight and opinions relating to the program, the persons being interviewed or other related topics. As these informal conversations became a part of their daily routines, the graduate student researchers began feeling uneasy as to exactly what constituted "data." For example, when the local member discussed a student about to be interviewed while the team was sitting around the kitchen table having a cup of coffee in the evening, was this data, to be included in field notes? As the team members became friends as well as colleagues, the concern about roles was heightened -- was there any time when the graduate students were not being researchers?

Each situation had to be responded to on its own terms; there are no hard and fast "rules" that provide quick answers to these types of questions. The graduate students were encouraged to talk about their concerns with their local team members so that they could resolve them together, respecting the trust upon which their relationship was founded. We found that at times the local members would function as researchers, with their perspective incorporated into the framework of the study. At other times the local members were informants, contributing data. We had to be careful that the categories created to reflect one aspect of reality, such as "researcher," "informant," and "data," did not then create their own reality, oversimplifying the complexity of the social world and undermining the potential usefulness of the research project.

The entire research project staff met every two weeks to discuss overall progress and planning. The challenge of supporting the autonomy of each researcher and research team -- important for the vitality of the data collected at each site -- and yet maintaining a coherent overall project direction quickly surfaced and remained one of the major challenges facing the project throughout this stage. It is an issue mentioned often by methodologists (e.g., Guba and Lincoln, 1981).

Data were analyzed by individual researchers, by research teams and by the principal investigator following collection at the first three sites. This was initially organized so that the graduate students conducted a preliminary analysis of the data from their respective sites and then consulted with their local members for validity and additional insights. This process created some major problems because it reinforced the distinction between the "university" and "local" team members. The local team members tended to become passive in this new role, looking to the university researchers to "tell" them what was found rather than seeing themselves as part of the process of creating meaning. The university persons became reinstituted as the "experts," undermining months of work developing collaborative relationships and cutting the project off from the benefit of the insights of those persons most familiar with the persons and programs being examined.

A research associate and an additional team member were added during the analysis of the first three sites. The research associate was an experienced qualitative researcher with a background in adult literacy work but no prior involvement in this research project. She was able to act as an "auditor," checking the process and procedures of the project and responding to the preliminary analysis; she provided the professional assistance and collaboration that went beyond what realistically could be expected of graduate students. Also at this point, the research teams were reconfigured to minimize the possibility of an individual or team biasing the data and to respond to changes in graduate students' schedules as the project moved into a new academic semester. Time for new team building was a concern here, but it seemed to go fairly quickly, probably due to the extensive opportunities students had had for interaction with each other and with each other's data.

## SECOND STAGE

During the data collection at the first three sites there was a change in state level staff; two of the four persons involved in negotiating the grant for this study were replaced by persons with quite different orientations to research, to ABE, to evaluation, to the definition of their roles in relation to ABE, and to the nature of their desired relationship with the university. By the time the preliminary analysis of the first three sites was completed, the new state staff were in place and it was important to begin involving them in the process.

This research was designed to be responsive to major stakeholders' questions and to include a continuing dialogue throughout the research process, ensuring that we were indeed addressing their questions in ways that were meaningful for them. Therefore, a change in personnel in key positions had important implications and raised difficult challenges. One of the central issues, of course, was how to help the new state staff feel some kind of ownership of this study although they were "inheriting" it, in progress. Related to this was how to make sure that their concerns were incorporated into the study somehow, even though we were halfway through data collection. Even more fundamentally, I was concerned about the new staff's understanding and acceptance of qualitative research and the type of findings and conclusions that this paradigm would support. Finally, how much should be shared at this point to involve and inform the new staff without somehow compromising the integrity of the research?

We had an initial meeting in which I explained the design of the study and shared with them some of our preliminary findings. I also asked them if there were specific issues they wanted the evaluation to address. No questions were raised about the design itself in the first meeting; the staff reaffirmed that they were supportive of an evaluation and looking forward to the study's conclusions. An additional class site was added to our sample as a result of this meeting, representing a special population of interest to state staff but not previously included in the design.

The results of the preliminary analysis were used to refine and focus the data collection at the next two sites and at the state level, and to guide the initial collection and analysis of program documents and of numerical data representing the entire system. When this round of data collection was completed, another preliminary analysis was conducted by individual researchers who then collaborated with their team members and then with the principal investigator (who had analyzed all of the data). The principal investigator wrote a preliminary report to which the field researchers and the research associate responded. The report was revised and then the major points were presented verbally to the state level staff for their response. State staff asked questions for clarification and discussed some of the possible implications of the preliminary analysis, but did not raise any fundamental issues about the emerging findings and conclusions.

## VALIDATION

At this time it was important to provide opportunities for additional ABE personnel to become involved in the study; we wanted to validate our emerging findings with a larger sample of the program directors, instructors and other stakeholders. Therefore, we arranged two sessions at the regularly scheduled statewide ABE conference. We wrote to all of the ABE programs prior to the conference, explaining that we had preliminary results of the evaluation study and that we needed their participation at this point. We invited them to attend the sessions, the first of which was to present the analysis and the second, the following day, to gather their response. We wanted them to have the opportunity to think and talk with each other about the analysis before responding to us.

Only about 15 persons attended the first meeting, and they raised a few questions about some of our analysis. The following morning there were an additional 30 persons, primarily because more people had arrived at the conference rather than because they had heard about our session. We had to amend our plans; the research associate facilitated the meeting with the group from the previous day and the principal investigator worked with the group of new persons. Both sessions were tape recorded and later transcribed.

The persons in the meetings corroborated our analysis and findings to a large extent. Two preliminary constructs were challenged which helped deepen our level of analysis and provide direction for additional data collection. The meetings were frustrating, however, because of the low attendance and low participation. The point that received the most enthusiastic support related to feelings of powerlessness in the system. There was general disbelief that their input -- or that the evaluation study itself -- would have a bearing on the future of the program. This helped explain our problems with attendance at the validation meetings. After all, persons truly feeling powerless will look with great skepticism at a meeting to influence the outcomes of an evaluation study.

The results of this round of meetings were incorporated into data collection at the last site, conducted by the principal investigator. Drafts of the report were circulated to research team members and the research associate for additional validation. The major conclusions discussed during the previous meetings continued to be supported as the structure of the supporting analysis was refined. The final report was presented to the state staff in early spring, 1985.

## DISCUSSION

Most of the issues raised to this point are general to qualitative research; a few, however, were specific to evaluation. For example, this was designed to be an adaptation of Stake's (1975) "responsive" evaluation design. Such a model is based upon the assumption that there is an understanding of and willingness to engage in collaborative work. However, in a system in which such work is by far the exception rather than the rule, many persons simply do not know how to collaborate and do not trust the notion of a cooperative venture. Clearly, rapport and trust must be established with the stakeholder community as well as with participants, and the collaborative process painstakingly nurtured.

We also found that stakeholders' questions and assumptions often were based upon more traditional and quantitative evaluation models. In retrospect, it appears that we did too much "telling," and not enough soliciting their images, internalized models, and questions so that we could work with their conceptual frameworks, helping them expand their understanding of evaluation research. Unfortunately, this problem became apparent only at the end of the study, when the report was presented and its usefulness questioned.

Evaluation criteria were another issue; how does an evaluator apply concepts like "merit" and "worth" (Guba and Lincoln, 1981) in a field like ABE in which there are no agreed-upon standards of "good" programs? Furthermore, how are the perspectives of informants to be respected within the evaluation criteria when the informants appear to be largely unaware of any alternatives to their ways of operating?

Perhaps the most fundamental issue for me has to do with attempting to conduct research that is based upon a paradigm that is inconsistent with the university's institutional culture and, often, with the culture of the group that is the focus of the inquiry. I can see now how I became enmeshed at times in the dominant sociocultural reality that emphasizes individual expertise rather than collaboration. This kind of research requires developing an alternative cultural environment in the university that will enable more sustained collaborative research in the future.

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# TYPOLOGY OF LOW-LITERATE ADULTS BASED ON DETERRENTS TO PARTICIPATION IN ADULT BASIC EDUCATION

Elisabeth R. Hayes[1]

## Abstract

Through the use of cluster analysis, six types of low-literate literate adults were identified according to their mean scores on five deterrent factors. The typology provides a basis for the development of strategies to increase enrollments of specific subgroups of the low-literate population in adult basic education.

## PROBLEM STATEMENT

The increasing national attention devoted to illiteracy in the United States has dramatized the fact that a large proportion of the low-literate adult population does not participate in traditional literacy programs. Recent research (Hayes & Darkenwald, 1986) has supported prior assumptions that low-literate adults perceive a variety of barriers to their participation in adult basic education (ABE). Research has also indicated that low-literate adults do not form a homogeneous population. Fingeret (1983) characterized illiterates along a continuum, ranging from the "cosmopolitans," who are economically successful, often pass as literate, and have heterogeneous, extended social networks, to the "locals," who belong to low socioeconomic, often subcultural or ethnic groups, and have homogeneous social networks. Hunter and Harmon (1979) propose four groups of low-literate adults, according to certain social and economic characteristics, and suggest that the most disadvantaged are almost impossible to serve in traditional literacy programs. Even among those low-literates who do eventually participate in ABE, great differences exist in motivation and social background (Mezirow, Darkenwald, & Knox, 1975).

The diversity revealed by these studies suggests that different barriers to participation might be more salient for different groups of the low-literate population. Hayes and Darkenwald (1986) found that perception of deterrents to participation in ABE varied according to certain sociodemographic characteristics. However, while such characteristics may be used to predict some differences in deterrents, these variables considered in isolation do not seem to provide more than a general indication of the distinctions that might be made among low-literate adults according to their perception of deterrents.

The purpose of this study was to develop a more comprehensive way to view systematic differences in groups of low-literate adults through the creation of a typology based on deterrents to participation. As Darkenwald and Valentine (1985) point out, typologies are useful both in theory-building and in improving professional practice. Typologies provide a way to group individuals according to a variety of characteristics, thus incorporating diverse information into a meaningful conceptual framework. This typology of low-literate adults promised to contribute to general understanding of the low-literate population and, from a practical stance, to aid in the recruitment of specific subgroups.

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## METHODOLOGY

### Sampling & Data Collection

The data base employed by Hayes and Darkenwald (1986) in an investigation of the factor structure of deterrents to participation in ABE was used as the foundation for the present inquiry. The sample consisted of 160 ABE students in seven urban ABE programs. These adults were asked to identify the barriers that prevented their participation in the past. The use of this sample did not permit the development of a typology descriptive of the entire low-literate adult population. However, the typology is representative of the most immediate potential participants in ABE. Information about such groups is perhaps of greatest direct benefit to practitioners who must devote limited resources to addressing barriers that will be most successfully overcome.

The individuals in the sample were all reading at or below the sixth grade level. Their characteristics were similar to those described in other research (Mezirow, Darkenwald, & Knox, 1975) as typical of urban ABE students. The majority of the sample were female (68%), Black (65%), and unemployed (59%). The mean age of the sample was 29.7 years; the mean level of previous educational attainment was 9.0 years. The development of the data collection instrument, the Deterrents to Participation Scale - Form LL (DPS-LL) is described in detail by Hayes and Darkenwald (1986). The DPS-LL consists of 32 Likert-type items, each representing a discrete deterrent to participation in ABE. Respondents were asked to indicate how important each item was as a deterrent to their participation prior to their enrollment in ABE classes. To ensure that the respondents understood the written items, all directions and items were read aloud by an instrument administrator. The alpha reliability of the DPS-LL was .82. Its content validity was established by the use of interviews with low-literate ABE students and ABE teachers to generate the individual items on the scale.

### Data Analysis

Cluster analysis was the statistical procedure used to develop the typology. Simply put, cluster analysis is "the grouping of entities (in this case, individuals) into subsets on the basis of their similarity across a set of attributes" (Lorr, 1983, p. 11). A disjoint clustering procedure, SAS FASTCLUS, was selected. In this method, all observations are sorted at each level of analysis without respect to cluster membership in previous cluster solutions. This resorting allows the discovery of new natural clusters at every level.

Observations were clustered on factor scores based on the five orthogonal deterrent factors identified by Hayes and Darkenwald (1986): Self-Confidence, Social Disapproval, Situational Barriers, Attitude to Classes, and Personal Priority. Variables used in cluster analysis must be expressed in a uniform metric, so that they are not given unequal weights in the analysis. Standardized factor scores met this criterion. Sociodemographic characteristics in addition to cluster means on each factor were used to interpret the cluster solutions. The following variables were used in the analyzes: sex, age, level of previous educational attainment, employment status, dependent children, and age of youngest dependent child. Information about race was also computed; however, this information failed to discriminate between clusters and therefore is not included in the description of the typology.

In the initial analyzes, one case consistently appeared as a separate cluster. This outlier, representing an atypical individual rather than a true cluster, was deleted from the sample. Therefore, the N in the final analyzes was 159. A series of cluster analyzes was performed that derived two through eight clusters. A final solution was selected that maximized the number of clusters with meaningful patterns of cluster means on the five deterrent factors.

## FINDINGS

Of the seven solutions obtained, the six cluster solution was selected as the most useful for the development of a typology according to the criteria described above. It yielded the largest number of meaningful groups clearly distinguishable from each other based on deterrent scores and sociodemographic characteristics. These groups remained relatively stable in solutions with larger numbers of clusters, with some small changes in numbers. New clusters obtained in further analyzes were of questionable value for a typology. The additional cluster in the seven cluster solution was tiny, and disappeared in the eight cluster solution. The eight cluster solution included an outlier (not a true cluster) and a group difficult to distinguish from a previously identified cluster, thus making little contribution to a typology.

Two clusters in the six cluster solution had small N's, representing low proportions of the total sample. While small numbers might raise doubts about the validity of these clusters as representative of "types," they consistently appeared in solutions with fewer and larger numbers of clusters, and therefore their inclusion in the typology was considered justified. However, statistical tests of differences in socioeconomic characteristics were rendered invalid by these small groups. Therefore, differences between clusters were simply described in in relation to the sample as a whole.

## Six Types of Low-Literate Adults

Type One. This group, consisting of only 3.8% of the total sample, scored highly on Social Disapproval, and low on all other deterrent factors. They had the highest rate of employment (83%) of any group. Conclusions based on background characteristics must remain speculative due to the cluster's small N, but the results suggest that the group consists of employed individuals who have relatively positive attitudes towards themselves as learners and towards education, but who fear a negative response to their participation in education from family, friends, and co-workers.

Type Two. This type comprised the second largest group, including 18.9% of the total sample. Their highest deterrent score was on Situational Barriers, followed by SelfConfidence. These individuals were somewhat younger (mean age 27.0) and had the lowest rate of employment (23%) of any type. The group had the highest proportion of females (87%) and an extremely high proportion (90%) had dependent children; the mean age of the youngest dependent child ( 5.0 years) was somewhat lower than the mean of the total sample. This type seems to consist of young women who are deterred from participation by childcare responsibilities and perhaps by financial difficulties corresponding to lack of employment, along with low self-confidence.

Type Three. This group (12.6% of the sample) was distinguished by a high proportion of males (50%), the highest mean age (38.2 years) and the lowest grade level attainment (7.6 years) of any type. Their high ranking of Self-Confidence as a deterrent factor leads to the conclusion that these individuals were primarily deterred by fear of failure and perhaps the perception of being too old to learn. These somewhat older adults also scored highly on Personal Priority as a deterrent, perhaps reflecting a diminished perception of a demand for education as a means of career development.

Type Four. This type, the smallest in number (2.5% of the sample) had its highest deterrent score on Attitude to Classes, and its second highest score on Social Disapproval. The group's lowest score was on Situational Barriers. Due to the small size of the cluster, its characteristics must be discussed with caution; however,the group is remarkable for its low mean age, 18.2 years, and its high proportion of males (75%). For these young drop-outs, negative educational experiences and peer group pressures, rather than work or family commitments experienced by older adults, appear to present important barriers to participation.

Type Five. This group, 16.3% of the sample, had a high score on Personal Priority and a low score on Self-Confidence as deterrent factors. This type is characterized by its high proportion of females (85%), a correspondingly high proportion of dependent children (73%), and a low rate of employment (38%). Like Type Two, this group seems to consist of mothers whose family responsibilities and need to find employment take precedence over education. However, in contrast to the second type, they perceive lack of time rather than lack of money or confidence as a major deterrent.

Type Six. This group is perhaps best described as "low-deterred." These individuals had low scores on all deterrent factors. The sociodemographic characteristics of this type are similar to the sample as a whole, except that a smaller proportion (37%) had dependent children, and the mean age of the youngest dependent child, 9.2 years, was the highest of any group. The disproportionately large size of the group (45.9% of the sample) seems to indicate that it represents individuals most likely to participate in ABE: younger females (mean age 28.1) with a reasonably high level of educational attainment (9.3 years) who are generally free from dispositional kinds of barriers, as well as from family responsibilities leading to situational barriers.

## CONCLUSIONS

The results of this study reveal that meaningful subgroups of the low-literate population can be identified based on their perception of deterrents to participation in ABE. Due to the nature of the sample, it cannot be assumed that the typology represents all possible types of low-literate adults; in addition, the validity of the identified types (and the factors on which they are based) must be established through replication of the study with additional groups of low-literate adults. However, the findings do make clear the value of this approach in providing information about deterrents experienced by specific groups of the low-literate population, beyond that yielded by a consideration of the correlations between deterrent factors and sociodemographic characteristics in isolation. The usefulness of the typology is demonstrated in part by the resulting distinctions made between groups with similar background characteristics. Specifically, two groups identified as primarily unemployed females with children exhibited very different mean scores on the deterrent factors; this suggests that efforts to recruit these groups must vary considerably.

### Implications for Practice

The study shows that low-literate adults should not be treated as a homogeneous group in respect to their perception of barriers; accordingly, an undifferentiated approach to recruitment in ABE appears to be inappropriate. The typology provides a basis for the development of strategies to address the barriers experienced by specific subgroups.

A strength of the analysis as a guide for practice lies in the identification of the unique combination of barriers experienced by each group. Most groups had high scores on more than one deterrent factor. It could be hypothesized that the influence of each type of barrier might be mediated by the relative importance of other kinds of barriers; from a practical stance, this finding suggests a need to address similar kinds of barriers in different ways for different groups. It also suggests that a unique blend of approaches may be most effective in overcoming the distinctive combination of barriers experienced by each group. For example, the group consisting primarily of older employed adults with a high mean score on Social Disapproval and low means on other deterrent factors may be most effectively reached through educational programs offered in cooperation with employers or community organizations, to promote the development of a supportive social enviroment. To recruit the group of young adults with high mean scores on both Social Disapproval and Attitude to Classes, promotional messages that emphasize the difference between ABE and high school may need to accompany the development of special programs geared to address the needs of young adults as a unique group.

ABE professionals can determine the need for new marketing techniques by assessing their programs' current enrollments of individuals in each of the identified groups. Overall, the typology can assist practitioners in attaining the ultimate goal of more effectively serving greater numbers of the many diverse groups in the low-literate population.

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# HISPANIC PARTICIPATION IN ADULT EDUCATION

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## Abstract

This paper focuses on selected variables of a major study conducted during 1985 by the American Council on Education (ACE) in cooperation with the Texas Education Agency. The study involved a comprehensensive survey of approximately 11,000 GED candidates and adult education students in fifteen Texas counties having the largest Hispanic population. The major purpose of the initial study was to facilitate the future development of programs to meet the needs of GED candidates and adult education students. Several key family life variables, such as the number of children in the household, the number of adults in the household, and employment status are discussed. Also, findings concerning factors that influence program participation and ways that this participation may be increased are summarized.

According to the 1980 United States Census, there are approximately three million people of Hispanic origin living in Texas (U.S. Bureau of the Census, 1983). This represents 21% percent of the Texas population. Projected Hispanic populations for the state show this number increasing by more than 30% by 1990. Currently in Texas, there are about four million adults 18 years old or older who do not have a high school education. More than one million of these people are of Hispanic origin, most often from Mexico. Observations of Texas educators indicate that most of these four million adults are probably unaware of the availability of adult education programs throughout the state. Many educators believe that this need for information especially applies to the Hispanic population.

To increase the overall public awareness of General Education Development (GED) testing programs throughout Texas, especially in those counties with large Hispanic populations, the American Council on Education and the Texas Education Agency conducted a cooperative research project. The project's primary goal was to gather information essential to the development of future adult education programs and for meeting the needs of future GED candidates in Texas. (Additional and more detailed information may be obtained from the authors by request.)

## METHODOLOGY

With the assistance of the Texas Education Agency, the GED Testing Service developed a survey form for GED candidates, and one for adult education students. To encourage people of Hispanic origin to participate in the project, the forms were available in

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English and in Spanish. The survey asked for demographic information on racial background, age, gender, and number of adults and children living with them; highest grade completed, grades earned in school, information on high school interpersonal relationships with peers and school officials, and reasons for leaving school; current employment status, occupation, and employment plans; how and when they first learned about the GED Testing or adult education programs, reasons for taking the GED, and expectations of outcome subsequent to earning their high school credential; extent of reading, television watching, and radio listening activity, preparation activities prior to taking the GED Tests and how the programs could be administered differently to facilitate easier participation relating to scheduling provisions, childcare and transportation provisions. Several open-ended questions suggestions to improve services for candidates and adults, suggestions for getting more people to participate in the programs, and identification of what aspects of the program they found least or most enjoyable.

More than 200 GED examiners, adult education directors, teachers, instructors, and aides assisted in data collection by administering the survey forms to all GED candidates and adult education students immediately following GED testing or while attending class, between June 1, 1985 to November 30, 1985. Most respondents completed the survey in approximately thirty to forty-five minutes.

Approximately eleven thousand survey forms (for 5,779 adult education students and 5,082 GED candidates) were received by ACE. Results are summarized separately for GED candidates and adult education students. The data was further analyzed along ethnic categories to allow Hispanic/non-Hispanic comparisons. The results presented in the present paper include selected variables.

## RESULTS

### GED CANDIDATES

#### Demographic Information

Race/Hispanic origin. Approximately 51% of the GED candidates are white, 13% are black, while 30% report Hispanic background.

Number of children living in the household. Approximately 42% of the white respondents, 26% of the black respondents, and 19% of the Hispanic respondents indicated that they have no children living in their household. Twenty-eight percent of whites, 25% of blacks, and 25% of Hispanics report having one child in the household. About 19% of whites, 23% of blacks, and 26% of Hispanics report having two children in their household. Nearly 11% of whites, 22% of blacks, and 24% of Hispanics responding, reported having three or four children in their household. About 1% of white, 3% of black, and 6% of Hispanic respondents report having five or more children in their household.

#### Employment

Employment status. Approximately 63% of white, 47% of black, and 53% of Hispanic respondents report being employed either full-time or part-time. The most frequently cited occupations among GED candidates are handlers, helpers, and laborers (construction, freight, sanitation) (14%); sales (13%); and service (including cooks, custodians, and waiters/waitresses) (11%). Nearly 36% of white respondents, and 47% of Hispanic respondents indicate that they plan to get a job after attaining their high school credential.

#### Source of First Information about the GED Program.

Approximately 52% of the GED candidates report knowing about the GED Testing Program before they left school. Another 18% learn about the program within one year of leaving school and nearly 16% first learn about the program six or more years after leaving school. Most candidates report that they first learn about the GED Testing Program from friends and neighbors or relatives. Across all age groups, the percentage of candidates learning from friends varies from 43 to 47%. The percentage by which candidates first learn about the GED, whether from relatives, television, radio, or print media are roughly equal. One of every two Hispanics first learn of the program from a friend. By comparison, 37 of 100 black candidates and 31 of 100 white candidates find out from a friend. A school or educational agency first informs about 16% of whites, 10% of blacks, and 8% of Hispanics. Guidance counselors are the first source of information for about 6% of whites, 7% of blacks, and 2% of Hispanics. Overall, approximately 19% first learn about the GED Testing Program through school/educational agencies. Television and radio (combined) account for about 1% of the ways that candidates first learn about the program.

Reading and Media Habits. Seventy-five percent of all GED candidates report that they read on a regular basis. Approximatley 43% of those responding indicate that they read at least one to five hours per week and that nearly one of every four candidates reads between six and sixteen hours per week. Nearly 30% report most often reading journals and 7% read manuals. About 42% read magazines. Almost three of every four candidates responding read the newspaper on a regular basis. The most frequently read section of the newspaper is the local news section, with 66% of the candidates indicating that section. More than half read the national news; 40% read the classified section; 36% read the entertainment/TV section. The sports and comic sections are read by approximately 30% of those taking the GED tests with the editorial section indicated as the least frequently read section of the newspaper.

Television Viewing. Approximately 16% of the GED candidates in Texas report that they do not watch television regularly; 31% watch 1-5 hours per week; 25% report watching 6-10 hours per week. Slightly 8% watch more than 20 hours per week.

Radio Listening. Approximately 14% of the candidates report that they do not listen to the radio regularly. Nearly 31% listen between 1-5 hours per week and about one in five persons taking the GED Tests in Texas report listening to the radio more than 20 hours per week. About one third of the people responding report that they usually listen to rock-and-roll radio stations, approximately 30% listen to popular music stations, and 19% listen to country/western programming. Less than 5% of the GED candidates report listening to radio stations that broadcast in Spanish.

### Suggestions for Improvement of Services by GED Candidates

Responses to open-ended questions on the survey concerning ways to improve services to the public indicate that among a subsample of 990 candidates, approximately 25% of those responding suggest that more flexible and more extensive testing schedules (including evening and weekend) would improve services. About 21% suggested that more publicity about the tests would improve services. Nearly 18% suggest that more testing locations are needed. Suggestions for publicizing the tests stressed the need for specific information on test schedules, test center locations, and fees, as well as information about the tests and skills required to pass them. In response to a similar item concerning ways to make preparation for the GED tests easier, nearly 29% of the Hispanic GED candidates indicated that improvement could be made by increasing the announcements of the GED program, as compared to 22% of white and 20% of black respondents.

### Suggestions for Getting More People to Take the GED Tests

Of a subsample of 993 questionaires, nearly 22% suggested ways to get more people involved in GED testing. About 76% indicate a need for more publicity in accomplishing greater participation in the program. Television and radio were the most frequently cited means of publicizing, with 57% and 53% of all GED respondents indicating them, respectively.

## ADULT EDUCATION STUDENTS

### Demographic Information

Race/Hispanic origin. Approximately 9% of the adult education students are white, 14% are black, and 65% are Hispanic.

Number of children in the household. Approximately 26% of all adult education students report having no children in the household. About 22% report having one child at home; 23% report two children in the household; about 15% report having three children in the household; nearly 8% report four children in the household; approximately 7% report having five or more children at home.

Employment

Employment Status. Approximately 42% of all adult education students responding report being employed. About 8% are unemployed and not seeking employment, while nearly 27% are unemployed and seeking employment. The most frequently cited occupations of adult education students are handlers, helpers, and laborers (construction, freight, sanitation) 20%, service (domestic, cooks, custodians, waiters) 10%, and sales (retail, wholesale) 8%. About 9% report that they have never been employed. Approximately 36% plan to "get a job," while 22% plan to "change employers". About 10% plan to stay with their current employer and nearly 20% seek a better job with the same employer.

Source of First Information about the Adult Education Program.

Approximately 22% of the adult education students report that they knew about the adult education program before leaving school. Another 11% report learning about the program within one year of leaving school, while 35% report having first learned of the program six or more years after leaving school. Most adult education students report having first learned of the program from friends (47%) and relatives (19%). About 10% first learned of the program through school or educational agencies. Guidance counselors are the first to inform nearly 3% of the adult education students. Television and radio combined, first informed about 44% of these students.

In response to a related item, 6% of adult education students report having a parent or parents enrolled in the adult education program. About 17% report having siblings enrolled in the program and nearly 12% report having other relatives involved in adult education.

Reading and Media Habits.

Eighty-two percent of adult education students report that they read on a regular basis. Forty-six percent indicate that they regularly read at least 1-5 hours per week and approximately 29% report reading between 6 and 16 hours per week. About 7% report that they read 17 or more hours per week. About 22% report most often reading books, 30% read journals, and 8% read manuals. Approximately 38% indicate that they most often read magazines. Fifty-four percent of the adult education student respondents report that they regularly read the newspaper. The most frequently read section of the newspaper, as reported by this group, is the local news section (56%). Fifty-three percent report reading the classified section, and about 37% read the entertainment/TV section. The sports section is read by nearly 31% of the adult education students, with the comics and editorial sections least frequently read.

Television Viewing. Approximately 17% of the adult education students report that they do not watch television regularly. About 35% report watching 1-5 hours per week; 22% report that they watch about 6-10 hours per week, and nearly 15% report watching 17 or more hours of television programming weekly.

Radio Listening. Approximately 19% of the adult education students responding report that they do not listen to radio programming regularly. About 38% listen 1-5 hours per week; about 18% listen 6-10 hours per week. Slightly more than 17% indicate that they listen to the radio at least 17 hours per week. Approximately 28% of the students responding, who listen to the radio regularly, select a "popular" music station most often. Nearly 20% indicate that they select an "easy listening" radio station and about 16% select a "rock-and-roll station. "Country/western" and "jazz" are the least frequently selected types of radio stations . Approximately 25% of these students report that they select a radio station that broadcasts in Spanish. (This percentage compares with 19% of the GED candidates who make this selection.)

## Suggestions for Improving Adult Education Services.

Of a subsample of 115 respondents who made suggestions, approximately 52% suggested that more flexible scheduling would improve services. These respondents recommended day and evening classes and longer class periods. Improved instruction/instructional materials was cited by about 47% of the respondents as an aspect of the program needing improvement.

Table 1. Suggestions for Improvement of Services by
Adult Education Students
N=115

| Suggestions for Improving Services | Number of Responses | PCT/Responses |
|---|---|---|
| More flexible scheduling | 60 | 52.2 |
| Improved instruction/instructional materials | 54 | 46.9 |
| Improved counseling services | 25 | 21.7 |
| Class facilities/equipment | 23 | 20.0 |
| Location of learning center | 22 | 19.1 |
| Transportation | 17 | 14.8 |
| Child care | 13 | 11.3 |

## Suggestions for Increasing Adult Education Program Participation

About 71% of a subsample of 203 adult education students who provided suggestions for increasing participation in adult education programs, indicate a need for more publicity. Additionally, in open-ended responses, the adult education students expressed that the content of public announcements on the programs should include information to allay fears of embarassment that many adult education students may feel in returning to an educational setting. Personal endorsement of the program to friends and relatives was perceived as important in increasing adult education program participation, as well.

## IMPLICATIONS

Most GED candidates find out about the GED programs before leaving school. School personnel (i.e., guidance counselors, teachers, principals) should inform all students who are about to leave school of GED testing programs. Depending upon available resources, maintenance of a file of students who recently left school can be used to conduct direct mail campaigns, as a means of notifying more individuals of program availability. Increasing the number of carefully designed television and radio announcements concerning specific information about GED and adult education programs on as many television networks as possible and on a wide variety of radio stations, as a strategy of reaching the largest number of people. These announcements should include specific information on the GED program, such as schedules, center locations, fees, etc. Announcements of adult education programs sensitive to the embarrassment sometimes experienced by adult students when returning to an academic environment should be designed. Poster campaigns should be initiated in the workplace, particularly in service and sales occupational areas. More flexible scheduling of classes should be implemented by both programs, providing day and evening classes. Weekend classes might also be considered.

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# ADULT EDUCATION POLICY: THE MISSING LINK

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## Abstract

The study reviews literature in adult/continuing education relative to the development and promulgation of organizational policy statements for the conduct of adult education programs. Policy for adult education is generally lacking in the structure of provider organizations in which case educational programing is influenced by inappropriate policy models. Policies, as reflected in the literature relate to (1) the teaching/learning function and (2) the educational delivery system. The study suggests the impact of problems facing providers may be reduced and the quality of learning enhanced through appropriate policy implementation. Recommendations for policy include equitable educational services for adults, protection of individual rights and potential for learning, integration of learning and life, and consumer protection.

Current literature in adult education is primarily oriented to the theory, principles, and practices related to adult teaching/learning activities. The growing literature in this area far exceeds what is desired in the development and application of supporting educational policy found in adult education programs and organizations. The increasing numbers of practitioners going forward in the practice of adult education with little time or effort given to the development of educational policy by their sponsoring organizations raises questions related to the future success of adult education and offers insight into present criticisms of the field. A review of the literature reveals:

1. Well-developed adult education programs may in fact be operating on very tenuous circumstances, without appropriate organizational mission and policy statements. This lack of formal commitment to adult education can result in insufficient financial and program support from within the organization.
2. The lack of policy places adult education into a short range rather than a long range perspective which can result in educational programs which lack scope and depth to meet real community and individual needs.
3. Without policy direction organizationally sponsored adult education is open to critics who allude to the difficulty of definition, the diversity of learning activities, and the nebulas nature of the field. The literature reveals similar problems are experienced in defining policy and delineating the application of the concept in adult education organizations.

In general, policies are broad statements, preferably written, that reflect an organizations mission objectives and provide guidelines for administrative action. In this respect, policies are relatively stable, change slowly, and provide a limitation on the discretionary

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decision making of managers (Sisk and Williams, 1981).
Simon (1976), reports that policy includes any general rule that has been established or the most important of such rules as promulgated by upper management.

Davis (1967) sees policies as a practical instrument of formal organizations and along with plans, organizational structure, and procedure provides the framework for accomplishing the mission and intent of the organization. Policy statements that outline methods for educational program offerings are decisions that determine such varied outcomes as who will be the recipient of adult education programs or under what general conditions the learning will take place.

Continuing education has been a marginal act in educational institutions for a long time. In an article titled "Diversity Without Design, Continuing Education at the University of Michigan," Berlin (1977) described the practice and organizational quality of continuing education as "organized chaos; anarchy; diversity without design; institutional mindlessness; adrift in a sea of overlap, duplication and competition" (p.180). Such a statement calls for policy promulgation. The necessity for a policy framework in provider organizations is defined by three constraints: (1) intended mission, (2) institutional capabilities, and (3) available resources (Strother & Klus, 1982).

Knowles (1980) reports that policy provides for general organizational purposes which define the role of adult education, identify social and institutional goals, provide direction for program activity, and convey educational philosophy and values for making program decisions. Adult education policy statements can be written in a manner supportive to the spirit of andragogy relative to learning environments and organizational thrust by describing what the organization will help learners do rather than what it will do for the learners (Knowles, 1980; Blackburn, 1984; Kaufman, 1974).

The importance of reflection and review of current policy statements for adult education is important for the development of future policies. Colleges and universities may benefit from reviewing early foundations of their institutions involvement with citizens beyond the typical college age. Harrington (1977) states, "...institutions may want to work out plans for the future that will combine the past experiences of the institutions with current opportunities" (p.212).

The general lack of organizational policy regarding the education of adults has been evident in the absence of organizational deliberations for planning broad integrated continuing education programs to serve the updating needs of both organizations and individuals (Kaufman, 1974).

Institutional policies provide an organizing influence in the services and staff performance functions in adult and continuing education institutions. In this respect, policy provides for productive partnership arrangements between various organizational departments and program functions within the larger organizational structure.

## Policy Defined

Educational providers tend to confuse policy with mission and procedures.
From a social and public policy perspective, DeNeufville (1975) believes "a policy is a statement of objectives and often the approximate means to reach it" (p. 197). The facilitating function of policy in moving organizational goals to action is reflected in the following statement: "a program is a specific set of measures often designed to implement a policy" and that "...the effect of policy and policy making is in its effect on behavior and the structure of relationships" (Moynihan, 1970, p.197).

The ambiguity in usage of the term policy is a concern of Simon (1976) who suggests considerable improvement would result if different terms were used for different policy concepts including, (1) legislative policy, relating to the ethical premiss of management; (2) management policy, the broad based non-ethical rules laid down by top management; and (3) working policy, the general rules limiting performance of general duties and responsibilities.

Simon (1976) believes that the line between policy and practice is not sharp unless the organization follows the practice of putting all its policies in writing.
According to Pollard (1978), policy may be categorized into various applications including the following: (1) operational policy which has measurable effects, (2) non-operational policy whose results cannot be measured, (3) futuristic policy which will result in future structural changes and behavior, and (4) retrospective policy which confirms and legitimizes existing structures and behaviors resulting from previous policy.

Institutional policies for education according to Myer and Scott (1983), should cover far-reaching functions and activities including curricular materials, instructional methods, written report of student progress, identification of students with special learning needs, evaluation of student learning and related school oriented events. Although it is inappropriate to emulate pedagogical models, adult educators can benefit from such a review in terms of exploratory and developmental purposes.

The need for policy in regard to the adult learning function of provider organizations is but one motivating factors for policy development. The institutional and delivery problems brought on by organizational competition, disharmony, and the serving of popular needs by educational institutions caused Griffith (1980) to suggest that policy be directed toward reducing organizational competition, increasing coordination, and merging of associations.

Colleges and universities have been challenged to place the adult education function in a position of equal importance with the other educational functions and to establish disciplinary relationships with the service arm of the institutions (Harrington, 1977). Autonomy and organizational status are desirable, however unlikely, without firm statements of institutional policy (Knowles, 1980) in which adult educators are a major element in the policy development process (Houle, 1980).

The scope of policy development is a function of the type of adult education organization (Houle, 1980) including size and complexity of the provider unit, the units relationship to the larger organizational structure, and the nature of the adult education program and client group. The scope of functional policy areas in adult education includes teaching format, program planning and development, learning environment, promotion and advertizing, participation in the teaching/learning process, extent and nature of educational services, distribution of educational services, and costing/pricing policies. Organizational policy as reflected in the literature primarily relates to (1) the teaching/learning function and (2) the educational delivery system.

The various approaches to policy development in adult education literature are nondescript; however, they are summarized by Cross and McCartan (1984) as (1) the laissez-faire or hands-off approach, (2) the flag waving approach, and (3) the direct involvement approach.
The mission and policy statements of today's colleges and universities were developed and applied when the primary service group was youth. It follows then that many organizations still operate today under the same policy statements as when they were developed to serve youth.

Although mission and policy for adult education and support services is lacking in both the literature and in the practice of adult education by provider organizations (Oaklief,1986), the overall impression is that policy is:

1. Relatively nonexistent and usually derived from inappropriate pedagogical models.
2. Vague and subject to loose interpretations by administrators and program managers.
3. Generally limited to generic services for adult learners with little mention of special adult learner groups.
4. Relatively dated in that the substantial part of the very limited literature was published prior to the rapid development of the field in the late sixties (Knowles,1977).

## Concerns for the Development of Policy

The approach to integrating adult education policy include, (1) determining the scope for each of the policy areas and (2) giving on-going analysis to the organizational environments which have direct influence on the adult students. There is need to safeguard a level of democratic control in the development and implementation of adult education policies. In this respect, the impact of expertise as the sole determinant in policy development for adult education programming should be avoided. The failings of expertise in policy design is inherent in that most declarations of policy state objectives of organizational activity without stating a level of adequacy which the service is to reach (Simon, 1976).

Educational policy should be translatable into recommended practices and procedures for the provision and enhancement of adult learning. Policy should be sufficiently related to the total educational mission of the organization so that the policy is identifiable with this thrust. The following policy areas represent larger individual and societal concerns:

Policy Area #1: *The Potential of Adult Learning and Development* - Policy should provide for the development potential of adults throughout their lives by proactive learning involvement.

Policy Area #2: *The Locality of Adult Learning* - Provider organizations should deliver learning and development environments in a variety of locations and settings accessible to adults.

Policy Area #3: *The Integration of Adult Education and Life* - Educational policy should provide for learning events and applications at times and locations convenient to the learners.

Policy Area #4: *Consumer Protection in Adult Education* - Policy should provide for collaboration between providers of adult education to insure the quality and integration of learning environments.

Policy Area #5: *Information and Learner Services* - Potential learners should have fair and equatable awareness for learning opportunities. Policies should insure that educational services provide a supportive environment and facilitate the adults' potential for learning.

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# QUALITY CONTROL IN NON-TRADITIONAL EDUCATION

Bonnie F. Shaw[1]
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## Abstract

Declining enrollments in traditionally aged college students has caused universities to recruit adult learners into non-traditional programs to ensure institutional continuity. While these programs have become institutionalized, questions continue concerning the academic integrity of curricula, academic adequacy of a parttime faculty, and the academic viability of a delivery system that does not adhere to traditional standards. This paper presents a model developed by the College of Professional Studies of the University of San Francisco for quality control in curricula, faculty and classroom instruction in non-traditional degree programs designed for adult learners.

In the 1970's and 1980's, declining enrollment in the traditionally aged college student led many institutions of higher learning to turn to the adult population as a means of ensuring institutional continuity (Pacific Western University, 1982). New programs focusing on professional education and tailored to meet the special needs of adults employed full-time were added to existing curricula, the so-called "non-traditional" programs that employ "alternative delivery systems." For example, just in the area of executive management development, the Harvard School of Business Administration has estimated that such programs are an $80 million a year business for universities and colleges (Koberstein, 1986).

Although in its early days, non-traditional education existed outside the mainstream of the university environment, it has since become institutionalized, with courses and majors now typically housed in and offered by the traditional departments and colleges within the larger university setting (Pacific Western University, 1982; American Society for Training and Development, 1983). However, issues of quality control and legitimacy still exist within accrediting agencies, fulltime faculty and administration. Questions arise concerning the academic integrity of the curriculum, the academic adequacy of a parttime faculty who are practitioners rather than career academicians, and the academic viability of a delivery system that does not adhere to the conventional standard of one hour of class per week for each hour of credit. The AAUP, for example, has been particularly critical of the extensive use of less than fulltime, tenured faculty, which it sees as "crippling academe" (Heller, 1986). The purpose of this paper is to present a model for quality control in curriculum, faculty and classroom instruction for programs designed for the working adult student.

The College of Professional Studies (CPS) of the University of San Francisco (USF) offers undergraduate and graduate degree programs to approximately 1600 working adult students throughout the State of California each year. Study is provided at forty learning sites to 95 groups of 16-20 students each who remain together during their year of residency.

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Undergraduate students typically enter CPS with at least 60 transfer units of credit and 10-12 years of professional work experience. During residence at the University, students complete a major of 30-36 units and can petition, through the College's Evaluation Center, to challenge in writing the remaining units required for graduation.

Majors are offered in the areas of human resources management and organization development, as well as the humanities and the liberal arts. A major, 10-12 pre-designed and sequenced courses (there are no electives), consists of standardized curricula with prepared lesson plans and pre-selected texts. In this way, students in San Francisco are studying the same material as students in San Diego, Los Angeles, Fresno, San Jose or Sacramento.

Classes meet one evening per week for four hours and are taught by adjunct instructors, who bring contemporary professional experience as well as academic credentials to the classroom. Faculty members are recruited to teach courses based not only on their background and experience, but also -- and perhaps as important -- on their ability to actively engage students in their own and classmates' learning. As such, the CPS faculty pool consists of 350-400 members.

To ensure and maintain academic quality, the delivery system, including curricula, faculty and instruction, is subject to on-going scrutiny. The curricula for the different degree programs are designed by content experts, with input from faculty and students. Each course has a set of learning outcomes, or behavioral competencies, the instructor is to attain; this is to ensure some measure of consistency and, at the same time, allow for the unique backgrounds and perspectives of the different instructors teaching the same course. Faculty and students are also encouraged to critique each course at its completion; this information is used to upgrade program content.

In addition to the learning outcomes that have been established for all courses in each of the nine degree programs, the College has been developing and testing competency-based evaluation criteria for prospective and teaching faculty over the past decade. They are:

1. General Intellectual Competence
   - Well-developed cognitive skills (e.g., analyzing, critiquing, theorizing, synthesizing, etc.)
   - High-level language skills and rich quality of discussion
   - Metalogging (i.e., breadth of intellectual range, making general-to-particular links or transitions, using both divergent and convergent thinking)
   - Openness and intellectual tolerance
   - Curiosity (i.e., commitment to inquiry)
   - Creativity (i.e., appropriately innovative and, at the same time, disciplined)
2. Academic Discipline Competence
   - A wide background and appropriate degree
   - An appropriate concentration or specialty
   - Currency with literature and developments in the field
   - Contributions to the field (e.g., publications, academic activities and innovations, etc.)
   - Broad academic experience with adult education models, processes, and students
   - Impressions and recommendations of expertise provided by colleagues, mentors, and/or supervisors
3. Practitioner Competence
   - Contributions to the workplace (e.g., innovations, projects, technical reports, etc.)
   - Breadth of professional experiences
   - Demonstrated and documented willingness to take on difficult and/or increasingly responsible tasks
   - Membership(s) in and active involvement(s) with professional associations/societies
   - Evidence of continuous professional development

- Evidence of a commitment to keeping pace with the changing/evolving nature of the practice

4. Teaching Competence
   - Lectures and presentations are coherently organized, well-paced, interesting, engaging, and directed to the learning objectives
   - Instructor stimulates discussion(s) and facilitates interaction(s)
   - Is sensitive and responsive to adult students' needs and learning styles
   - Answers questions appropriately and with examples from theory and from practice
   - Successfully conducts structured activities, simulations, case studies, and group discussions which are related to the learning objectives
   - Provides students with accurate, clear, constructive, timely and ongoing verbal and written feedback
5. Classroom Management Competence
   - Takes responsibility for, structures, and controls the learning process
   - Maintains rapport and good working relationships with students
   - Encourages and supports a professional atmosphere in the classroom
   - Manages conflicts that might arise due to personalities, value differences, disparate points of view, etc.
   - Clearly defines assignments, requirements, and grading criteria, and relates these to the learning objectives/outcomes stated in the lesson plan
   - Returns written work in a timely manner
   - Models the skills of a problem-solving discussion leader
6. Research Advising Competence
   - Demonstrates knowledge of appropriate methods of inquiry and research designs, including qualitative and quantitative approaches
   - Has the ability to help students select an appropriate research question or problem
   - Demonstrates skill in supervising applied, organizationally relevant research projects
   - Has the ability to guide students in the use of standard research report formats
   - Sets deadlines for students and returns materials in a reasonable and timely manner
   - Is actively involved in the research project (i.e., makes site visits, reads, reviews, and comments on drafts)
7. Educational-Administrative Competence
   - Submits required forms, materials, and/or reports in a timely manner
   - Facilitates smooth transitions among instructors
   - Adheres to the terms of the contract (e.g., holds class for the full four hours, holds regular office hour(s) outside of class time, etc.)
   - Is available to students and staff in person, by phone, or by letter
   - Attends faculty meetings on a regular basis
   - Represents the University (i.e., encourages students, assists students with administrative difficulties, alerts staff regarding potential problems, etc.)

Communicating and evaluating these instructional competencies to and for faculty occurs in a variety of ways:

1. Screening interview. All prospective faculty, after their resumes have been reviewed, attend a group interview with other prospective instructors and the College's professional staff. This is followed up by an individual interview with the Director of Faculty Development, during which the instructional competencies are explained and explored.
2. Orientation and Training. Once appointed to the adjunct faculty, instructors are required to attend an all-day orientation before actually entering the classroom. Instructors are exposed to all aspects of the program, including
   - an overview and brief history of the University and the College
   - the College's delivery system and pedagogical model, including the use of structured curricula
   - a description of the student body

   - description of teaching and classroom management techniques
   - administrative expectations
   - evaluation procedures
   - overview of the curriculum for a specific program, with particular emphasis on established learning outcomes/competencies for each course
3. Site Visit. The Director of Faculty Development makes a classroom visit early in the life of a learning group and, whenever feasible, near the end of the group's residence. This visit serves several purposes, including assessment of the quality of instruction (program content, instructional process, classroom management/atmosphere), troubleshooting students' administrative problems with support services, feedback on the curriculum, etc. A written report is prepared subsequent to the visit and discussed with the instructor.
4. Student Evaluation of Instruction. At the end of each course, students complete a computerized evaluation. Questions have been structured to address the seven comptencies listed above. Forms are scored and the summary results shared with the instructor. The comments students provide to open-ended questions are also summarized and given to the instructor. The Director of Faculty Development works with the instructor on strategies to capitalize strengths and improve weaknesses that have emerged from both the site visit and student evaluations.
5. Faculty Meetings. The College holds several kinds of faculty meetings based on the divergent needs of instructors. For example, meetings are most frequently held in a specific region, often on a specific topic of concern that cuts across programs. When necessary, program/content specific meetings are held, e.g., changes in the curriculum, faculty input to curriculum design or revision, etc.

While for the most part this quality control program has been successful, it is not without its problems. Some which we encounter and continue to address are:

1. Constraints on academic freedom, i.e., instructors are sometimes ambivalent about not designing their own course, selecting their own texts, establishing their own learning objectives
2. Site visits not always effective, i.e., the focus for students becomes administrative concerns at the expense of instructional evaluation; students unwilling to express true feelings about an instructor for fear of grade reprisal
3. Students frequently do not complete the written evaluation of the instructor or submit an unscorable form
4. The amount of information that must be dispensed to and integrated by faculty prior to going into the classroom, i.e., evaluation of a new instructor must take into account the advantage gained by having experience with the College
5. Occasionally poor attendance at faculty meetings

As we stated earlier, this is a quality control program that has been in development over the last ten years. It is by no means now, nor will it ever be, a completed process, but this is one of the challenges we accept as non-traditional educators.

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# THE USES OF INNOVATIVE METHODOLOGY IN ADULT EDUCATION RESEARCH

Hal Beder[1]
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## Abstract

This symposium discusses the use of innovative methods and procedures to address "difficult-to-answer" research questions in adult education research. Three case studies will be presented: understanding the values and attitudes of learners who cannot express themselves in English, how adults learn from each other in self-planned learning, and a typology of low-literate adults.

"Objectivity in science," writes Kerlinger, "is a procedure, a method, a way of going about one's scientific business" (1979, p. 12). Methods and procedures, in Kerlinger's use of the concepts, are logically derived rules for conducting research and analyzing data that when followed, lead to inferences which are both internally and externally valid. It is through application of these rules that research in the behavioral sciences derives its "truth." Consensus among researchers that commonly accepted rules of research are true is critical to the development of theory, for without this consensus there would be no criteria for assessing the veracity of theory other than blind belief.

Consensus that commonly accepted rules and procedures are valid enables rules and procedures to function as tools. When we have a research problem, we reach into our tool kit to select the most appropriate one.

If one accepts Kerlinger's position, the value of commonly accepted rules and procedures is obvious. Yet there are negative consequences as well, for important research questions for which standard methods and procedures are inappropriate often go unanswered. Moreover, it is precisely upon these difficult-to-answer research questions that important advances in theory turn. Unless they are addressed, theory development is stymied.

This symposium explores three different difficult-to-answer research questions, describes how each was addressed, and through discussion, will identify the negative and positive consequences of utilizing innovative approaches to research.

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## UNDERSTANDING THE VALUES AND ATTITUDES OF LEARNERS WHO CANNOT EXPRESS THEMSELVES IN ENGLISH

Understanding the values and attitudes of learners toward adult education is critical to a theory of participation. Felt needs, anticipated rewards, perceived barriers, and a host of other commonly-studied constructs associated with participation theory fall into this realm. Generally speaking, investigation of this dimension relies on research subjects' self-report, and data are collected through survey or interview. Observation, another standard data collection method, is inappropriate as values and attitudes are internal phenomena and cannot be ascertained through observation. To be studied, values and attitudes must be expressed.

How can values and attitudes be investigated among research populations which cannot express themselves well in English? These populations include non-English speakers and low-literate adults, two populations of particular importance. This problem is addressed by Van Tilburg. Based on the work of Levick and Wheeler (1986), Lustbader and Wheatley (1981), Rejeski (1982), Sheppard and Taylor (1986), and Van Tilburg (1986), Van Tilburg proposes the analysis of learner's drawings, a form of non-verbal expression.

In a pilot study conducted by the presenter on children (N=42) participating in a Cooperative Extension program entitled "Keys for Kids," subjects were asked to draw a picture of themselves doing their favorite after school activity. Drawings were scored on three elements: number of persons in the picture, location of the scene, and activity depicted. Subjects were also asked to report how they felt when they were alone. Response options included: happy that I can take care of myself, afraid that something might happen to me, lonely, bored, ok, and other.

In regards to activities depicted, active sports (.41), watching television (.24), doing homework (.10), and quiet activity (.10) accounted for 85 per cent of all activity. Although the small N of the pilot precluded detailed analysis, it was found that those whose favorite activities included others, tended to mark "lonely" as one of their feelings about being home alone ($p<.05$).

## HOW ADULTS LEARN FROM EACH OTHER IN SELF PLANNED LEARNING

Since Tough's (1979) initial research, self-planned learning has become a major area of investigation in adult education. Tough and his many replicators have found that much self-planned learning relies heavily on interpersonal resources as contrasted with formal courses or written materials. How does one study interpersonal learning in a way that goes beyond mere description of the kinds of people consulted? Beder, the second panelist, describes how social network analysis is one way to solve the problem. Beder et al. (1983) were interested in how public school adult education directors learned important professional information from each other. New Jersey public school directors were asked from whom they were most likely to receive important professional information and to whom they were most likely to send it. Data from the seventy respondents were organized into "to whom/from whom" matrices and subjected to cluster analysis. Clusters of individuals were then organized into a social network map which enabled the researchers to identify professional teaching-learning networks at a glance.

It was found that learning networks were highly related to the geographical proximity of their members, that with the exception of 10 isolates, every member of the system was linked with all others, and that the number of years that one had served as a director was the variable that best distinguished isolates from learning network members.

## A TYPOLOGY OF LOW-LITERATE LEARNERS

Although low literate adult learners have been categorized on many dimensions, in most cases the categories have been determined by funding priorities which derive from the political process. Separating categorization from allocation policy, the question arises, "Are there basic types of low-level adult learners which are explanatory of predicted behavior and, if so, what are they?" Such knowledge has obvious importance for individualization of instruction and recruitment.

Our third presenter, Valentine, reports the methods used to develop a behavioral typology of low-literate adults in Iowa. The study, which employed a state-wide random sample, used three frames of data: 64 items on motivations to attend, a series of socio-demographic indicators, and the results of the Woodcock-Johnson test with measures both achievement and cognitive ability. When motivations were subjected to factor analysis, a conceptually meaningful ten factor solution resulted. The two remaining frames of data were then "clustered" on motivational type through the SAS Adclus procedure, thus resulting in a typology of the low-literate adult based on factors predictive of actual behavior.

## CONCLUSION

Use of innovative methods and procedures is frequently necessary if research is to be guided by the theoretical and practical significance of the problem rather than by the presence of familiar "tools" in the methodological tool box. However, in the absence of tradition as a guide, it is incumbent on the research to justify the appropriateness of research decisions, and this is not always easy. Furthermore, when treading on new ground, the power of experience as a guide is lost and the potential for mistakes dramatically increases. Use of innovative methods is at least important and probably necessary, but in using them, one must proceed with care.

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# MARKETING TO ADULT LEARNERS:
# USING FOCUS GROUP RESEARCH TO DEVELOP A MARKETING PLAN

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## Abstract

Focus groups are a qualitative research tool that have had limited use with adult learners. Focus groups allow marketers to probe the motivations of adults for returning to school, to explore barriers that prevent adults from enrolling and to understand which schools adults view as competitors and along what dimensions. Armed with this information, program administrators can write well-targeted marketing plans.

## INTRODUCTION

Marketing is getting someone to do something voluntarily. In the private sector, marketers want consumers to buy a product or use a service. In the nonprofit sector, it is the same. Marketers of educational programs want consumers to enroll in a particular program or school; in other words, to "buy" a specific academic institution or program.

As in the commercial world, educational programs face competition. The most commonly understood competitive arena is between institutions offering the same programs and the same terminal degrees. Yet competition also exists in individual decisions about how to spend one's time - both free and work-related. This form of competition continually confronts educational marketers who target adult and life long learners. Work, family, friends and personal time demands also influence how, when and which educational decisions are made.

To be successful in this competitive environment, educational marketers must:

1. understand the multiple forms of competition as seen from the adult's viewpoint; and
2. have a well thought out, action-oriented plan for motivating adults to enroll.

In marketing, nothing sustainable happens by chance or luck. Two tools help educational marketers achieve these goals. They are focus groups and a marketing plan.

## FOCUS GROUPS

A focus group is a group dynamic session in which a moderator leads eight to twelve people through a free-flowing, in-depth discussion. Focus group discussions are energetic and often punctuated with divergent opinions. This dynamic interchange between individuals leads to the "mental popcorning" which is characteristic of a well-run focus group.

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By expressing feelings and reporting on actual behaviors, focus group participants provide marketers with a rich verbal picture of consumer motivations, actions and attitudes. This information helps educational marketers design programs that are totally in synch with the natural ways the target market behaves -- another aim of marketing.

Focus groups also are an invaluable aid in developing marketing communications programs. Group discussions provide a linguistic blueprint of the target market's language and phraseology. Communications with an authentic feel to them can be created by mirroring the language expressed in the group.

Furthermore, in a competitive marketplace, just letting consumers know that "we are here" is an inadequate approach for reaching enrollment goals. It is a passive and limited recruitment strategy. As the private sector knows, the images, perceptions and opinions consumers hold of the product, the business and its competitors influence a purchase decision. The same is true in education marketing. Enrollment (ie, purchase) decisions are influenced by both the images, attitudes and perceptions of the sponsoring academic institution and its competitors. Focus groups are an excellent way to explore these images and perceptions.

Finally, focus groups help prevent the biases that often result when educators design programs based on their intuitive or "expert" understandings of the market. Through focus groups educators can verify their premises. Sometimes, marketers find the target market behaves in unexpected or "illogical" ways. When marketers make such discoveries, they have uncovered the true value of focus groups: the discovery of new market-related information that is not readily accessible through other research methods (for example, a questionnaire).

## THE SITUATION NEEDING MARKETING ACTION

The Regional Access to Nursing Education (RANE) Project is part of the College of Nursing at Lewis University. Lewis University is located in the far southwestern corner of metropolitan Chicago. The RANE Project is design to serve the working Registered Nurse considering a Baccalaureate degree completion program. RANE delivers regular university courses and related support services at four off-campus sites in the metropolitan area. In 1983, the RANE Project wanted to market its degree completion program at a new off campus site in an affluent county adjacent to Chicago.

Methodology. Before developing its marketing program, the Project decided to run two focus groups with adults in the target area. Twenty-three individuals participated in the two groups. Ages ranged between 24-65, with the majority (n=6) between 35-39. Twenty-two individual were female; one was male.

The focus groups had four objectives:

1. To probe adult motivations for returning to school;
2. To explore the barriers that prevent adults from returning to school;
3. To evaluate competitor schools; and
4. To assess various school's recruitment literature.

## FOCUS GROUP FINDINGS

1. Focus group participants were confused about the value and purpose of the academic degree they sought.
2. Individuals were frustrated because schools lacked uniform transfer of credit policies.

3. Convenience outweighed tuition as a key determiner in selecting a school.
4. Anxieties around poor or dormant study skills were barriers to enrollment.
5. No school in the market was perceived as the market leader in degree completion programs.
6. Recruitment literature from local schools was viewed as impersonal, jargon-laden, repetitive and undistinguished.
7. No school had a distinctive image.

## DISCUSSION

A key focus group finding (and a surprise to Project administrators) was participant confusion about the real value of the sought degree. Adult nurses were being pressured by professional organizations, educators and employers to complete the BSN. A BSN was a mandate for entry level positions. Thus, practicing Registered Nurses, who were no longer at entry level, had difficulty perceiving the relationship between administrator and educator dictates and their nursing practice. A common response was, "Show me the relationship between required course work and the practice of nursing...How will this degree make me a better nurse?" Marketing efforts must directly answer this question, since the targeted adults are clearly seeking answers to it.

Focus groups helped answer the question: What key factors determine whether a student will enroll in one school over another? The answer, in part, was that convenience was more important than tuition. In a very real sense, time is money. Thus, the site locations of courses, the travel times to and from these sites to work and home, and the time of day courses are offered become critical marketing elements in successful program design.

Credit transfer policies evoked strong negative comments. Focus group members felt frustrated because of perceived inconsistencies between schools in accepting previously earned credits. Adult nurses often had their previous course work evaluated by at least two schools. In the prospective student's mind, it was a simply a matter of evaluating School A against School B. What students found was that credit transfer policies varied greatly. Marketers should highlight credit transfer policies. Promotional literature along with student advising should explain what previous course credits are acceptable and why added coursework might be needed.

Focus group members wanted program and school information presented in an objective, factual manner. They wanted to read, in easy to understand terms, exactly what the school's course of study entailed. These individuals did not appreciate, nor did they tolerate, vagueness, inconsistencies and program/course descriptions that had semantic meaning only to those privileged individuals who held the interpretive code to the language used.

Returning adult students also were concerned about their adequacy as participants in a formal class and, as such, were anxious about competing with younger, more academically savvy students. The lack of recent classroom experience and nervousness about loss of adequate study skills were commonly expressed fears. Marketers must recognize that these perceived threats may be strong enough to keep students from entering or remaining in a program.

Finally, many adults attribute their success to the acquisition of instrinsic motivation. Most significantly, focus group members said "the degree is important to how I feel about myself." Marketers must recognize that returning adult learners need to have personal clarity and motivation in order to sustain their efforts and achieve success. Both faculty and staff should show appreciation of the knowledge acquired during students' earlier life experiences. As one participant said, "Pay attention to who I am and respect what I've done!"

# THE MARKETING PLAN

Marketing plans offer the best vehicle for organizing the institution's responses to focus group findings. The RANE Marketing Plan was a written statement giving the rationale and outline of all marketing activities for a given year.

Focus group findings shaped three major marketing goals:

1. To create a Project graphic identity program;
2. To use language expressed by focus group participants in all Project promotions; and
3. To develop a hierarchy of recruitment strategies targeted to the adult learner.

Identity program. A critical marketing challenge was to fill the void in adult learner's mind created by weak and ill-defined degree completion programs. Project administrators reasoned that a well-formed, distinctive and bold identity would break through the perceptual defenses adults used to screen out most promotional messages. The identity program's aim was to create a visual look immediately identifiable with the Project and to do so in visual style that mirrored personality characteristics of the targeted adults.

Based on the focus group research, the RANE Project created the following identity program. Because adult learners were:

> Unimpressed by extra frills, the Project logo was a cross made up of small squares.
> Serious minded, the type style was a classic type face.
> Approached by up to eight competitor schools, a strong purple ink was chosen to create boldness and marketplace distinctiveness.
> No nonsense decision makers, graphic lay out was kept simple, with ample amounts of white space surrounding text.

Consumer oriented language. Avoiding the impersonal and jargon-laden writing style of most recruitment literature was another important strategic decision. Program brochures were rewritten. Second person case was used throughout. This personalized the message and allowed readers to see themselves in the situations being described. For example, in a section describing the adult students who enroll in the Project, the brochure read:

> "Our students have a strong desire to develop themselves personally and professionally. They want their education to broaden and challenge them.
>
> Our students value their technical still and have demonstrated their competence in clinical situations. They want instructors who treat and respect them as professionals.
>
> Our students also value their time, since going to school still means finding time for work, for family and for themselves."

Hierarchical strategies. Recruitment strategies used the theory that consumers go through various states of information processing as they make an enrollment decision. Key marketing tasks were to

1. Create awareness that an new off-campus site was opening in the county;
2. Generate interest in this particular degree completion program;
3. Create a compelling reason to enroll; and
4. Reinforce the decision to enroll as correct.

The relationship between these items can be graphically seen as follows:

| TARGET GROUP | PRIMARY MARKETING TASK |
|---|---|
| All adults in county | |
| Adults interested in further education | Reinforce value of adult education |
| Adults interested in short courses | Refer to other schools |
| Adults interested in degree completion | Create value of degree completion |
| Adults actively looking for a program | Create awareness of RANE Project |
| Adults aware of RANE | Distinguish RANE from competitors |
| Adults interested in RANE | Use a one-on-one approach |
| Adults who enroll | Reinforce RANE as right choice |

What's different about the recruitment model outlined above is its hierarchical approach to marketing strategy. This segmented approach substitutes for the mass market approach frequently used. In this latter approach, one, all-encompassing marketing strategy is created. Broad-based promotional activities are aimed at the largest number of individuals in the target market. Numerous mass mailings characterize this approach, and there is generally no coordinated strategy to move individuals from one level of interest and motivational intensity to the next.

Targeted adults are seen as being in one of two categories: They are either interested or not interested; they either enroll or they don't. While such approaches can create generate awareness, they fall short in providing the specific motivational cues adults need to move from being just generally interested in a program to actual enrollment.

The RANE Project successfully used the hierarchical approach. Specific strategies and tactics were developed for each market segment in the above model. The aim was to move adults from one level to the next.

Program results. Based on a direct mail campaign to 9,367 adults in the targeted county, 434 (4.50%) requested a program brochure. Of those requesting brochures, 184 (42.4%) requested an enrollment packet. And from this group, 24 new students enrolled.

# THE INTERDISCIPLINARY, SEQUENTIAL SPECIFICITY, TIME ALLOCATION, LIFESPAN MODEL OF SOCIAL PARTICIPATION: A REPORT OF TWO APPLICATIONS IN ADULT EDUCATION

Peter S. Cookson[1]

## Abstract

This paper reports on an empirical assessment of the "goodness of fit" of the interdisciplinary, sequential specificity, time allocation, lifespan model of social participation" delineated by sociologist David Horton Smith with a particular form of social participation. Two studies were conducted to test the predictive power of this model to explain participation in discretionary learning activities: one involved a random sample of male heads of households in a low income area of a major North American city; the other involved participants in a large public school district-sponsored evening school adult education program in the same city.

## INTRODUCTION

Research on adult education participation has in the past been characterized by an absence of theoretical underpinnings. Theories which have been proposed to explain involvement of men and women in various kinds of learning activities have, on the other hand, tended to lack empirical referents. Future contributions to the research literature relating to this phenomenon of paramount importance to adult education practice may well be expected to address the disparity between theory and research. Only in the light of such contributions can informed judgments be made about the adequacy and validity of the theories of adult education participation that are currently extant.

Overlooked in much of the adult education participation literature is the degree to which adult education participation can be conceptualized as a specific form of social participation. In the sociology of leisure literature, for example, are numerous theoretical explanations for the behaviors of men and women during their discretionary time. The most comprehensive theoretical model of individual discretionary activity thus far advanced has been the inter-disciplinary, sequential specificity, time-allocation, life-span (ISSTAL) model of social participation (Smith, 1980). How the previous research and theory relating to adult education participation can be accommodated within this all-encompassing ISSTAL model has already been suggested (Cookson, 1986). The aim of this paper is to summarize the main findings of two studies mounted by the author to test the empirical adequacy of the ISSTAL model.

## THE ISSTAL MODEL OF SOCIAL PARTICIPATION

According to the ISSTAL model, social participation is the behavioral outcome of the joint linear influence of six sets of independent variables. In the two studies reported here, the independent variables represented five of those six categories. Social positional characteristics, because of the relatively greater ease of measurement, are represented more adequately than the other variable categories. Personality characteristics were represented by four of the same personality factors reported in several national studies of the effects of certain work conditions on psychological functioning (Kohn, 1969; Kohn and Schooler, 1969). Attitudinal dispositions included attitudes about religious activity and about the job, as well as the magnitude of interest in further learning activities. Beliefs and opinions included three factors based on a multiple item measure constructed by the researcher of opinions regarding the appropriateness of teacher-directed vis-a-vis learning directed learning activities and a single item measure of the belief that the respondent's job contributed to humanity. Definition of the situation variables comprised perceptions of the extent of personal energy available in discretionary time to expend on (a) non-work obligations and on (b) leisure.

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To avoid the trap of converting adult education participation to a dichotomous or trichotomous variable, the Litchfield (1965) Leisure Activities Scale (Short Form) was chosen to measure the criterion variable. The Leisure Activities Survey takes into account the continuous nature of adult education participation in both organized and natural societal settings. Scores for the individual items generated in the larger questionnaire study (described below) were subjected to factor analysis. For the respondents in both studies, the following four learning-related factors, comprising the sum of all pertinent item factor loadings, were computed: Informative Meeting Attendance, Non-fictional Book Reading, Magazine Reading, and Informative Television Watching.

## TWO STUDIES OF ADULT EDUCATION PARTICIPATION

### Data Collection

Two studies were mounted by the author in 1982-83 in a major North American city. Data for one study were gathered via a structured interview schedule administered to a random sample of 50 male household heads in a predominantly low income area. The same instrument was used as a questionnaire which was returned by approximately 400 men and women enrolled in a large public school board-sponsored evening school program.

Questions were designed to collect information relating to five of the six ISSTAL model categories of independent variables: (a) definition of the situation, (b) beliefs and opinions, (c) attitudinal dispositions, (d) personality factors, and (e) social positional characteristics. Too, questions covered four categories of dependent variables: (a) non-learning-related social participation, (b) (for those enrolled in night school only) enrollment in formal adult education courses, (c) a comprehensive measure of leisure activities--both leaning and non-learning related, (d) each of four adult education participation factors, and (e) a summed score representing the total of the four adult education participation factors.

### Zero-Order Correlations

Zero order correlations were calculated to measure the strength of relationship between the independent variables and the adult education participation factors. Table 1 presents the resulting correlation coefficients.

Many of the variables posited to exert a positive influence on adult education participation fail to do so. The null hypotheses of no relationship between many of the independent variables and the dependent variables are thus upheld. Comparisons drawn from both sets of data indicate both similarities and differences. Of all 58 independent variables, the only ones not shown to have significant relation with one or more of the adult education participation factors for--either data set--were the following: Energy for Non-work Obligations, Energy for Leisure, Self-directed Learning Orientation, Strength of Religious Belief, Personal Responsible Criteria for Morality, Parents' Health Status, In-laws' Health Status, Current Employment, and Complexity of Work.

In the interview study, none of the independent variables were shown to be significantly related to all four of the adult education participation factors. In the questionnaire study, three independent variables were shown to be significantly associated with all four factors: Perceived Place in Career, Job Satisfaction, and Closeness of Supervision.

## Multiple Regression Analysis

Because the ISSTAL model (Smith, 1980, p. 543) posits a linear prediction equation, multiple regression analysis seemed to be the most logical statistical tool to determine the prediction accuracy of this linear equation and to evaluate the contributions of the five sets of independent variables. The main focus of the analysis is examination of the extent to which variance in specific forms of adult learning can be explained in terms of the joint linear influences of variables comprising social positional characteristics, personality factors, attitudinal dispositions, beliefs and opinions, and definition of the situation variables. The analysis permits simplification of the ISSTAL model--at least the model as represented by the variables examined in this study. The analysis also permits examination of the effects of each of the independent variables while simultaneously controlling for the effects of all other variables. The next step is to examine the overall structure of linkages between the independent and dependent variables suggested by the ISSTAL model.

Fifty-eight independent variables were entered into the equation via the forward method, utilizing SPSSX statistical procedure. At each step all independent variables are reviewed for entry into the equation. Those with the smallest probability-of-F values are entered one at a time until all with probability-of-F values less than the .05 level of significance have been entered. Four regression equations were thus computed for each of the data sets. Examination of the resulting linear equations revealed that none of the variables which were selected for entrance into the linear equations for either data sets matched. No overlap was observed for any of the subsets of variables which gave the best linear equations for predicting adult education participation factors. A brief explanation of the multiple regression analyses run or both the interview and questionnaire studies follows.

## Informative Meeting Attendance

In the interview data set, only three variables met the criteria for entrance into the equation: School Achievement, Self-confidence, and Energy for Nonwork Obligations. The Multiple R was .596, $R^2$ was .355, and the F-ratio for the equation was 11.863 ($p < .0000$).

In the questionnaire data set, six of the 58 independent variables were selected for forward entry into the equation: What Work Does for Humanity, Total Annual Personal Income, Self-reported Social Class, Job Routineness, Number of Subjects Interested in Learning, Anxiety-Self-deprecation-Type I. The Multiple R was .343, $R^2$ was .117, and the F-ratio was 10.550 with .0000 significance.

## Non-fictional Book Reading

Three variables met the selection criteria for entrance into the equation for Non-fictional Book Reading in the interview study: Self-reported Social Class, Supervisor's Control at Work, and Parents Still Living. The latter variable was designed as an indicator of the respondent's position in the life cycle. The Multiple R was .660, $R^2$ was .436, and the F-ratio of the equation was 11.863 with a significance of .0000.

In the questionnaire data set, though relatively little of the variance in Non-fictional Book Reading could be attributed to any one of the independent variables, six were selected as having met the criteria for forward entry into the linear equation: Job Routineness, Job Commitment, Level of Schooling, Self-confidence, Number of Years of Schooling, Self-Directed Learning Orientation, Size of Community Where Grew Up, Number of Children, and Age in Years. The Multiple R was .456, $R^2$ was .208, the F-ratio was 12.430, with a significance of .0000.

## Magazine Reading

Of the fifty-eight independent variables, only two of the social positional characteristics concerning work conditions, Complexity of Work, and Supervisor Controls Speed of Work, were entered into the linear equation for Magazine Reading. The Multiple R was .523, $R^2$ was .273, and the F-ratio of the equation was 8.839 with a significance of .0006.

In the questionnaire study, relatively negligible 10% of the variance in Magazine Reading was attributed to four independent variables: Age in Years, Interest in Learning, Self-Reported Social Class, and Other-directed Learning Orientation. Multiple R was .315, $R^2$ was .099, and the F-ratio of the equation was 13.180, with a significance of .0000.

## Informative Television Viewing

For the interview study, four independent variables qualified for forward entry into the linear equation: Level of Schooling, Size of Community Where Grew Up, Supervisor Controls Speed of Work, and What Work Does for Humanity. The Multiple R was .738, $R^2$ was .544, and the F-ratio of the equation was 1.679 with a negligible .0266 significance.

A mere eight percent of the variance in Informative Television Viewing for the questionnaire study was accounted for by seven independent variables: Parents Still Living, Current Fulltime or Part-time Employment, Parent Status, Self-Perceived Place in Career, Number of Moves since 18 Years of Age, Free to Disagree with Boss, and Number of Years of Schooling. Multiple R was .291, $R^2$ was .085, and the F-ratio was 6.297, with significance of .0000.

## DISCUSSION

Limitations of space preclude detailed discussion of the numerous implications for both research and practice of lifelong learning to be drawn from the findings reported above. Suffice it to make the following five points:

(1) The divergence in the findings between both studies highlights the differences in the two sets of respondents: the interview study was based on a random sample of male household heads in a low-income neighborhood of a major North American city; the questionnaire study was based on a convenience sample--albeit a sizeable one--of students enrolled in a large public evening school program in the same city.

(2) The divergent findings within each of the studies, in terms of the failure of most independent variables to predict accurately each of the adult education participation factors, highlights the multidimensional nature of adult education participation, a fact that is often overlooked in much of the theory and research on the phenomenon.

(3) The complexities involved with the collection and analysis of so many variables posited to be predictive of social participation in general and of adult education participation in particular--even in an era of easy access to SPSSX and other computerized statistical tools--become enormous. To enter 58 variables into a path analysis which would be required to test further the postulates of the ISSTAL model becomes a mind-boggling nightmare. It may be more manageable to mount more modest studies which touch on overlapping portions of the ISSTAL model variable categories.

(4) To extend the analysis of adult education participation, research is needed to examine the extent to which the adult education participation factors identified in this study compare with alternative measures of the phenomenon. It would be interesting, for example, to compare the Litchfield instrument-based measures with the learning project measures utilized by Penland (1977) in his national sample study.

(5) Practitioners who plan lifelong learning programs for adults might benefit from examining the relationships between the work conditions experienced by participants and their patterns of participation. More study, obviously, needs to be done of the influence of those characteristics shown in this study to be predictors of certain forms of adult education participation.

(6) Neither study involved anything which even closely resembled a robust sample. The significance and generalizability of the findings are therefore attenuated. The interview study was based on a random sample of the population but the difficulties associated with gaining acceptance in a low income neighborhood precluded collection of data from a larger sample. The questionnaire study was based on a convenience sample which, though large, was fraught with a high degree of self-selection. Respondents represented a fraction of the total number of adult students who had been asked to complete a questionnaire.

(7) The concurrent studies reported in this paper constitute one of the first efforts to design research to test empirically the adequacy of the ISSTAL framework. Because of the problems noted, however, no definitive generalizations can be made with reference to that model. On the basis of the multiple regression analyses, however, it can be said that variables from each of the categories stipulated by the model did qualify as significant predictors of one or more of the criterion measures of adult education participation.

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